

TW ZOOM 85

FCA17001

TW ZOOM 85 QUARTZ DATE

FCA17201

Zoom Touch 600

FCA17101

Zoom Touch 600 QUARTZ DATE

FCA17301

REPAIR MANUAL

Nikon | NIKON CORPORATION
Tokyo, Japan

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SPECIFICATIONS

See the instruction manual

1 Outline

Main features

A full-automatic lens shutter camera with zoom optics:

- ① Motor-driven electric zoom system with 2.5X zoom ratio (32~85/F4.4~F10.9)
 - ② Lens protection cover
 - ③ Real-image viewfinder and zoom flash
 - ④ 3-mode zooming: Continuas zoom; continuas zoom shooting and image-size selector.
 - ⑤ Close-up to 0.65m with whole focal distance
 - ⑥ Forced infinity driving
 - ⑦ Spot AF
 - ⑧ Frame skip function
 - ⑨ Flash pre-firing mode
 - ⑩ Automatic backlight compensation and automatic flash-firing in low brightness.
 - ⑪ Panorama mode

2 Specifications

Picture format Normal: 24mm × 36mm
 Panorama: 13.3mm × 36mm

Lens

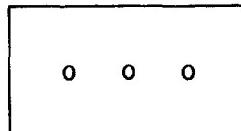
- (1) Lens construction: 10 elements in 8 groups ($2.5 \times$ zoom ratio)
- (2) Focal distance: W:32mm ~ T:85mm (nominal value)
- (3) F-number: W:F4.5 ~ T:F10.9
- (4) Shooting distance: 0.65 m (0.7m Flash cancel) ~ ∞ (in the entire zoom range)
- (5) T/W mode selection time: Approx. 2 sec.

Autofocus

- (1) Type: Electrical triangle focusing by active method
(2) Mode: ① Carefree autofocus mode
 ② Spot autofocus mode
 ③ Infinity focus mode
 ④ Image-size select
(3) Focusing range: 0.65 ~ ∞
(4) Autofocus lock: By depressing shutter release button

- (5) Too-close warning: 0.65m (Flash-fired), 0.7m (Flash cancel) Green LED lights up.
 (6) Too-far-warning: 5.8m (ISO 64 ~ 200), 8.8m(400~3200) Green LED lights up.
 (7) Number of steps: 28 Steps

- (8) Position of IRBD beam



Exposure control

- (1) Shutter Electro-magnetic programmed shutter also serves as diaphragm blade.
 (2) Metering Measures center and periphery separately.
 Center: Condensing lens + Cds cell
 Periphery: Cds cell
 (3) Auto-exposure range W: EV6~EV14.75
 (ISO 100) T: EV7~EV17.0
 (4) Exposure compensation Exposure compensation from +2.0EV to -2.0EV.

(5) Auto exposure delay	AUTO	1/45 sec
	PTS	1/45 sec
	Forced firing	1/45 sec
	SLOW	1/4 sec
	Firing pro-hibition	Max 1 sec

Viewfinder (1) Type Mirror-reflex real-image viewfinder

(2) Ratio of viewfield

	Full-size		Panorama-size	
	Vertically	Horizontally	Vertically	Horizontally
W	83%	83%	73%	83%
T	87%	84.1%	90%	84.1%

(3) Diopter -1DP/+0.5DP selectable

Speedlight: (1) Type Automatic zoom flash

(2) Mode AUTO
 Firing pro-hibition
 Forced firing
 Auto flash with red-eye reduction
 Slow syncro

- (3)Charging time Approx. 3.5 sec.
 (4)Guide No. Full-brightness flash W:15
 (ISO 100) T:16.8
 (5)Automatic backlight compensation
 Daylight flash mode is automatically selected in backlight condition. (ABLC system)
 (6)Automatic flash-firing in low brightness Z22: EV10.375 ~Z1:13
 (7)Display Red LED: Lights up Ready to fire
 Blinks Flash is not charged (in flash-firing conditions)
 Specially blinks PTS ready

- Self-timer** (1)Mode 2 modes can be set by self-timer button
 (2)Delay time
 • In one-shot operation 10sec.:
 (for 7 sec. the indicator lamp lights up and for 3 sec. it blinks.)
 • In two-shot operation
 the 1st shot: Same in one-shot operation
 the 2nd shot (AB): 5 sec. after the first shot (for 2 sec. the indicator lamp lights up and for 3 sec. it blinks.)
 the 2nd shot (SB): 6 sec. after the first shot (for 3 sec. the indicator lamp lights up and for 3 sec. it blinks.)

- Film advance** (1)Method Electric spool-drive system
 (2)Film advance speed Approx./0.8 sec./frame
 (3)Auto film rewind Film rewinding automatically starts when free sprocket signal is not input approx. 2.4 sec. or after taking 37th frame.

Power source 6V lithium battery pack (Panasonic CR-P2 or Duracell 223A)

Dimensions:
 Weight:

Item	Dimensions	Weight (without Battery)
TW Zoom85	148×78×68	460
TW Zoom85 QD	148×78×70.5	470

View finder internal LED indication

	Red LED	Green LED
Lights up	Ready to fire	Subject is in focus or infinity focus
Blinks	Specially blinks (4Hz) Flash is insufficiently charged PTS ready	Too-close-warning (4Hz) Too-far-warning (4Hz) Disabled focusing warning (8Hz)
Lights up	Does not light up	Insufficient battery power

Display timer Display disappears in 3 sec.
 Lens barrel returns to 32 mm position.

Frame skipping Manual mode: Frame number to be skipped is set manually.

Auto mode: Film is skipped automatically to the programmed frame if the following conditions are satisfied.

DISASSEMBLING

1 . Disassembling to rear body and lens barrel unit

Bottom cover -----	D 1
Rear cover -----	D 1
Camera back -----	D 2
Front cover -----	D 2
Discharging of the main condenser -----	D 2
AF unit -----	D 3
Viewfinder group -----	D 4
Flash base plate unit, amp base plate unit -----	D 5
Removing lens barrel unit -----	D 6

2 . Rear body

Connecting FPC -----	D 7
W / R gear group -----	D 7

3 . Lens helicoid

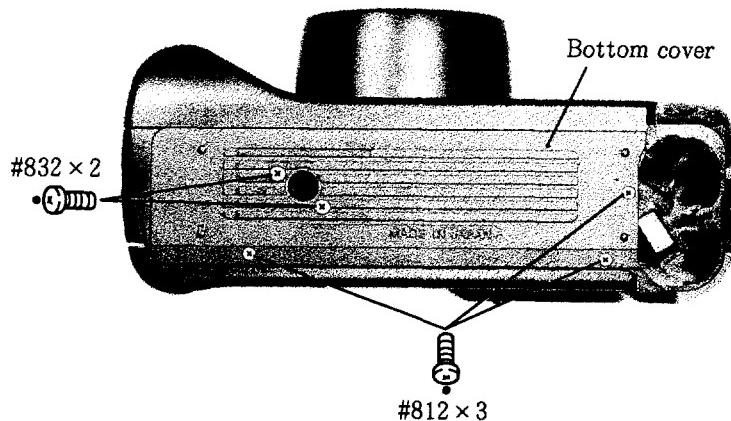
Retaining ring -----	D 8
Helicoid motor unit, joint gear group -----	D 8
Helicoid SW -----	D 9
Linear key, clutch -----	D 9
Lens barrel group -----	D 9
Lens cover unit -----	D 10
Guide tube unit -----	D 10
3rd lens group unit -----	D 11
3rd cam ring, lens cover shaft -----	D 11
Shutter unit -----	D 12
1st lens group unit -----	D 12

DISASSEMBLING

- Note :**
- ① Remove batterise before disassembling.
 - ② When disassembling, pay attention to the wire arrangement and mounting positions and types of screws to be removed.
 - ③ Be sure you are grounded when holding main FPC because static electricity exerts serious adverse effects on ICs.
 - ④ The “ • ” mark on the screws indicates they are tap-tight screws.
 - ⑤ The tone of pictures may be different from actual one. Make sure of the shape of parts when disassembling and reassembling.
 - ⑥ When removing gears, make sure to distinguish the front and back sides.

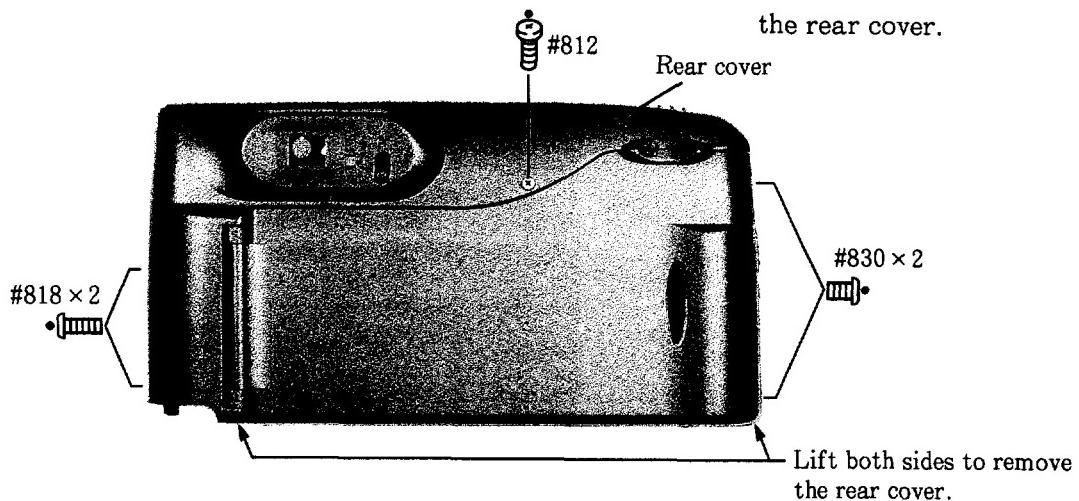
1 . DISASSEMBLING TO REAR BODY AND LENS BARREL UNIT

BOTTOM COVER

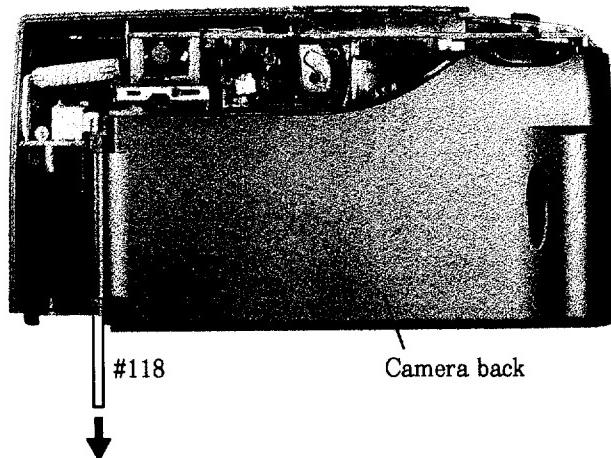


REAR COVER

Note: Be careful not to bend the power SW brush when removing the rear cover.

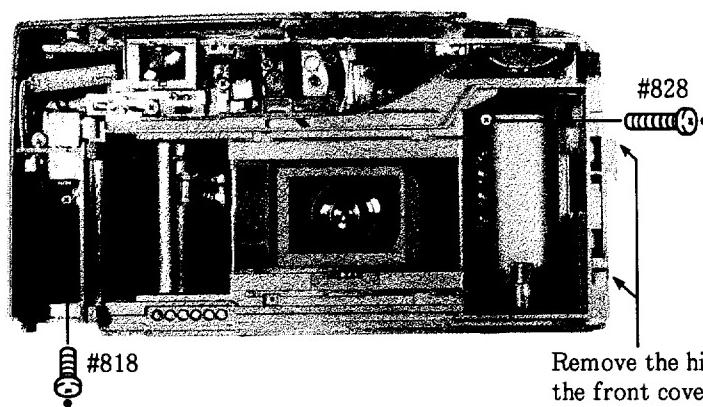


CAMERA BACK



- Pull out the back door shaft #118 to remove the back door.

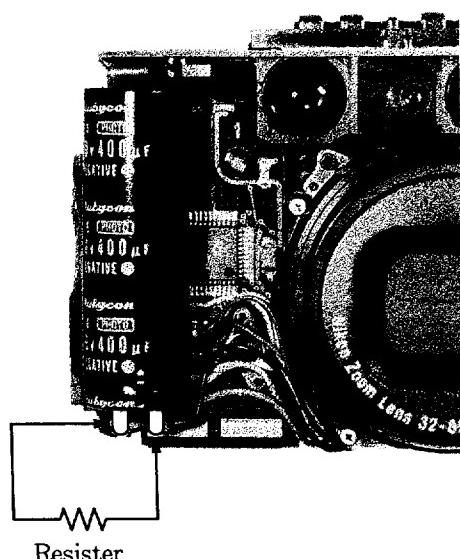
FRONT COVER



Remove the hinged two portions between the front cover and the body.

- When removing the front cover, the shutter release button and light-baffle ring are simultaneously removed.

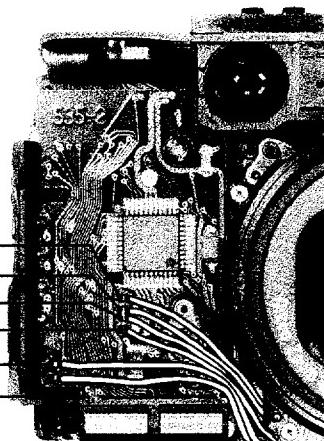
DISCHARGING OF THE MAIN CONDENSER



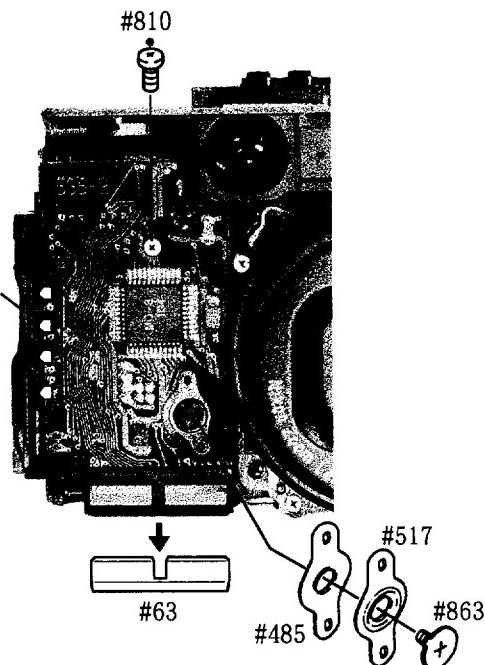
- Discharge the main condenser at the both sides.

- Use $2K\Omega / 5W$ resister to discharged.

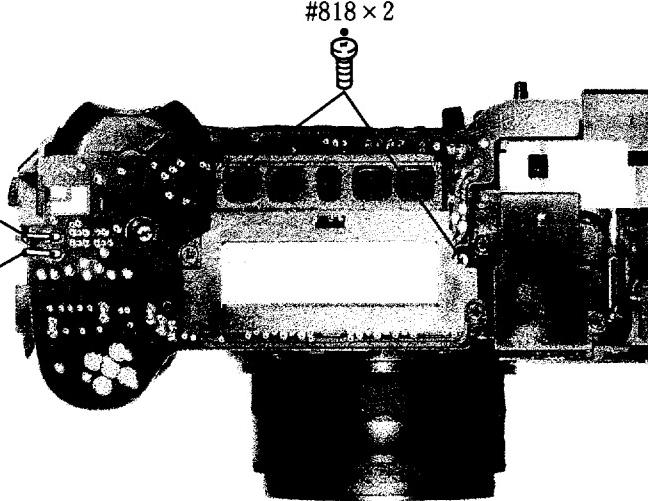
AF UNIT



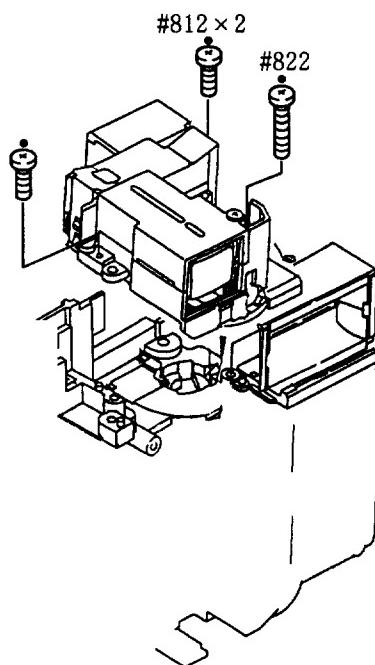
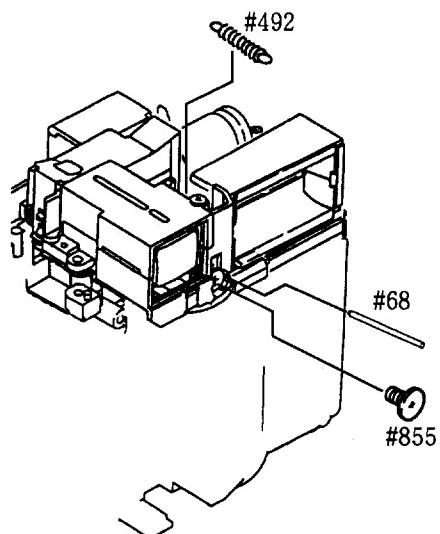
Remove soldering bridges between the MD base plate and the DX contacts.



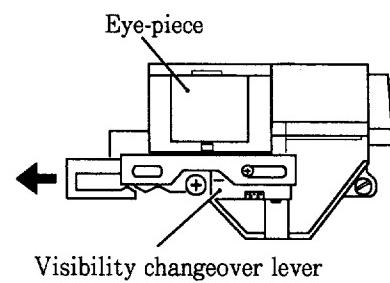
Brown: Free sprocket SW
Green: Free sprocket SW



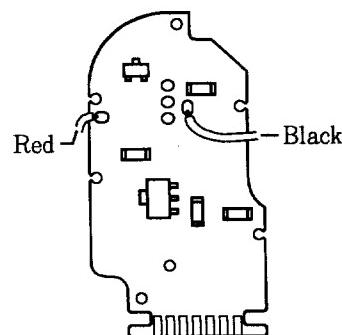
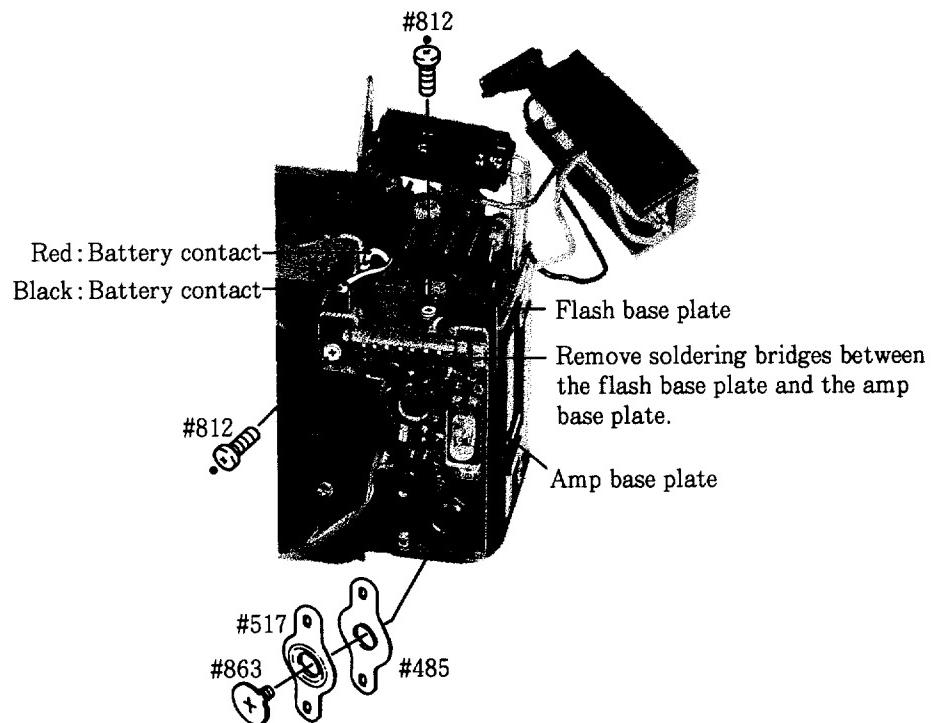
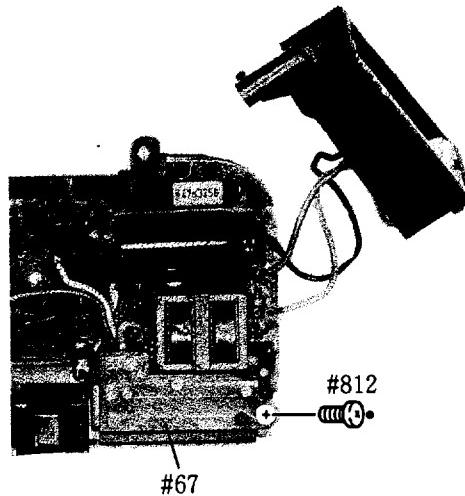
VIEWFINDER GROUP



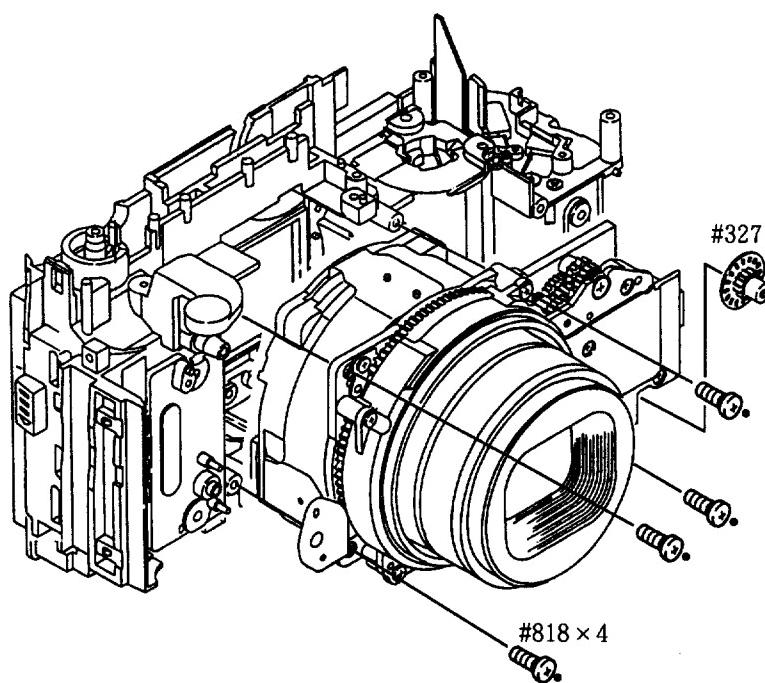
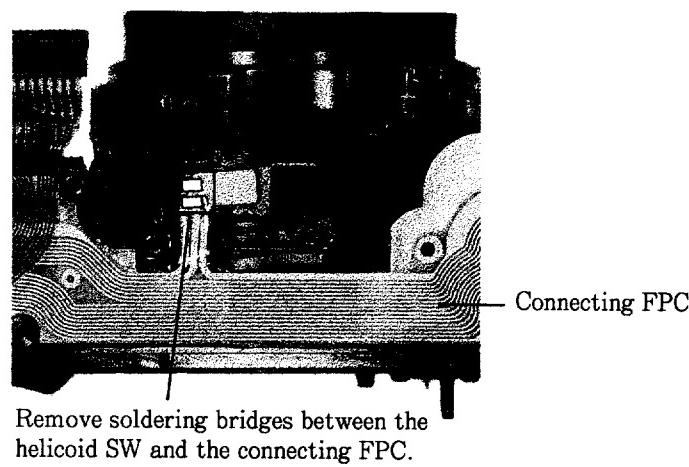
Reference: The viewfinder unit can easily be removed when the visibility changeover lever is at the position -1DP. (See the figure below.)



FLASH BASE PLATE UNIT, AMP BASE PLATE UNIT



(Rear side for flash base plate)

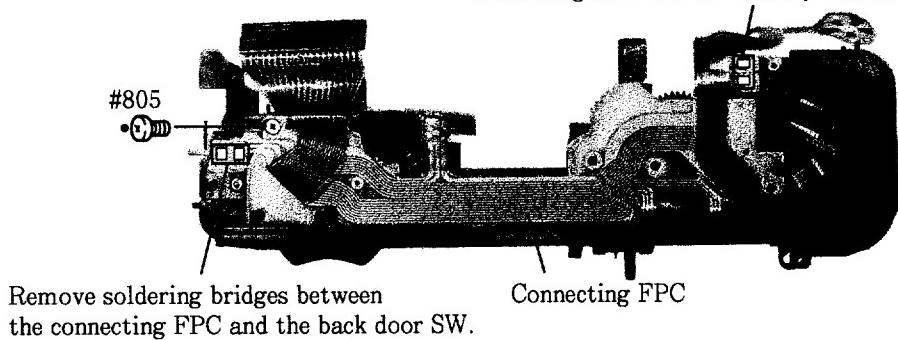
REMOVING LENS BARREL UNIT

- Remove lens barrel unit while being careful about wires and connecting FPC.

2. REAR BODY

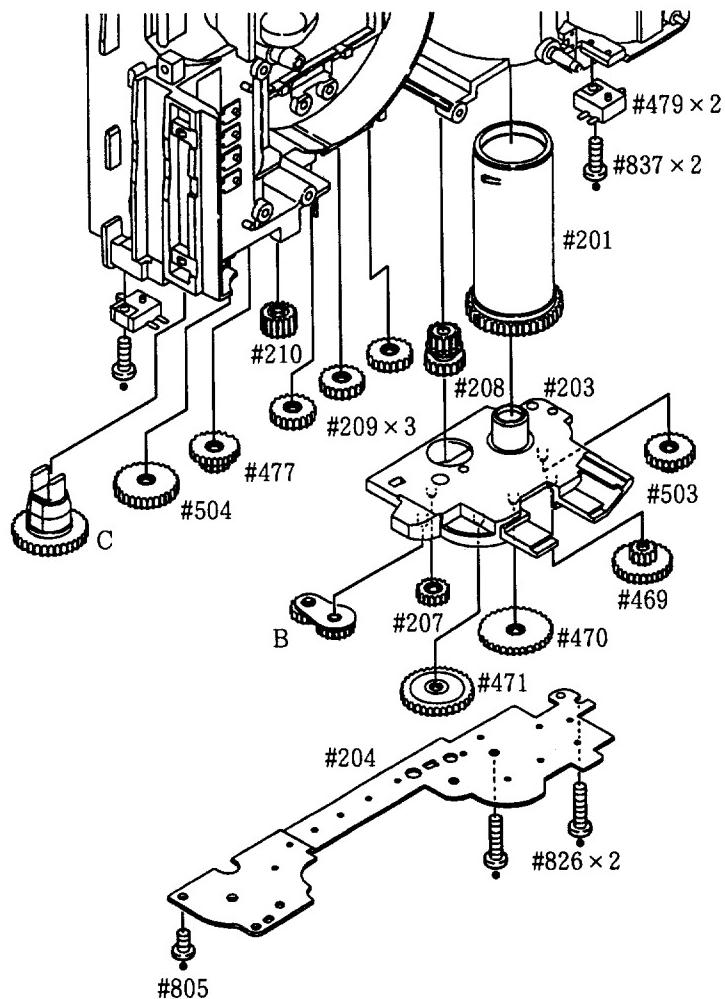
CONNECTING FPC

Remove soldering bridges between the connecting FPC and the battery chamber SW.



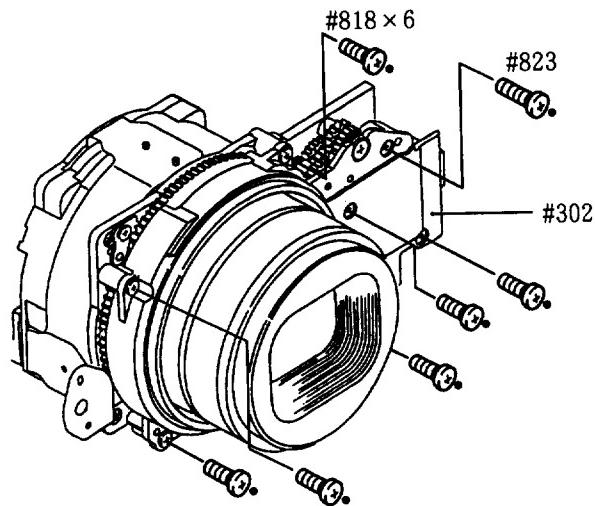
Note: Take care not to damage the connecting FPC by peeling it off forcibly, because it is attached with double-coated adhesive tape.

W/R GEAR GROUP

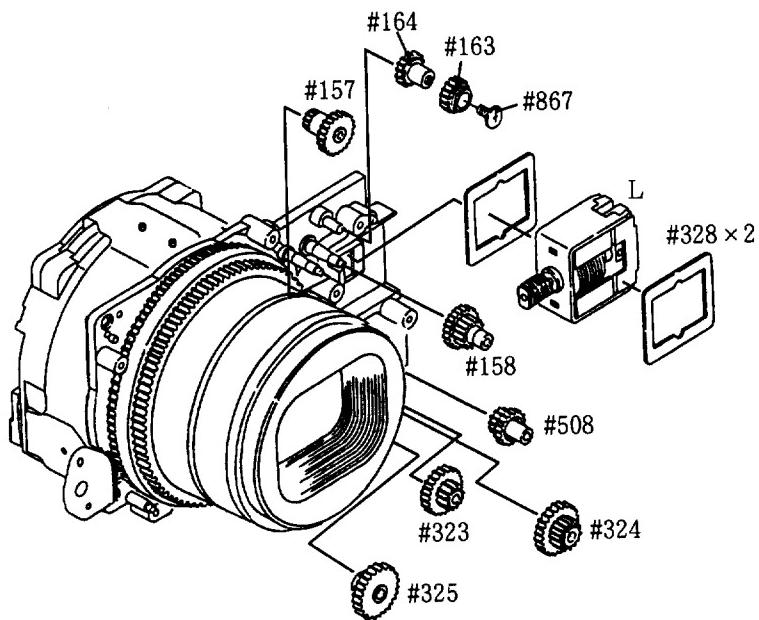


3. LENS HELICOID

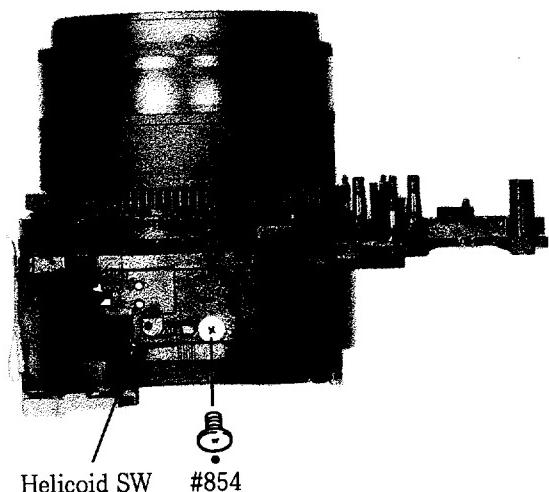
RETAINING RING #302



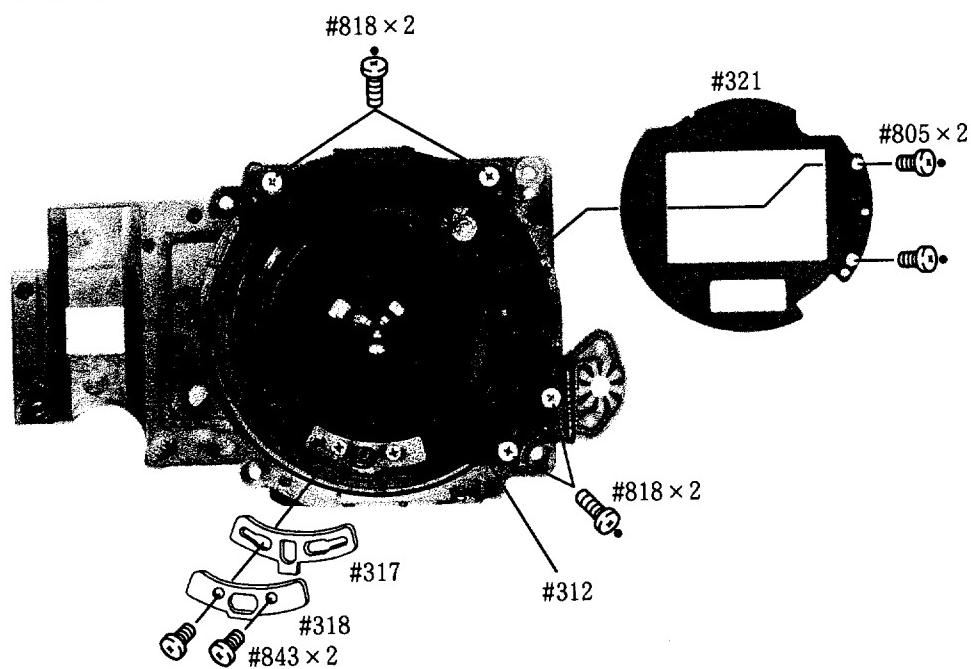
HELICOID MOTOR UNIT, JOINT GEAR GROUP



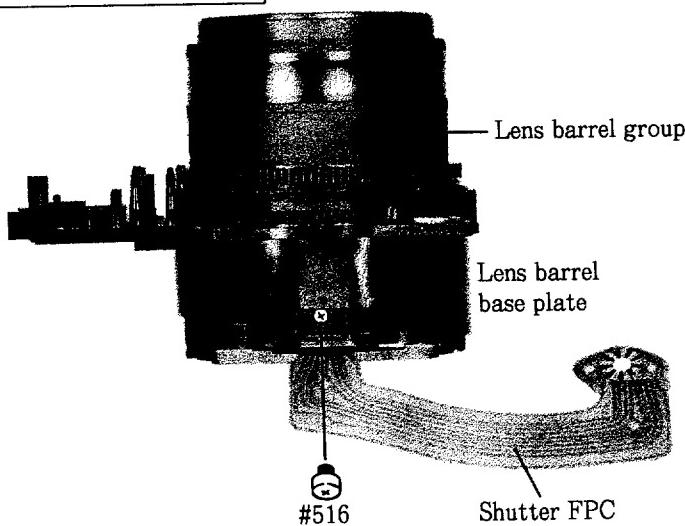
HELICOID SW



LINEAR KEY #312, #313, CLUTCH #317

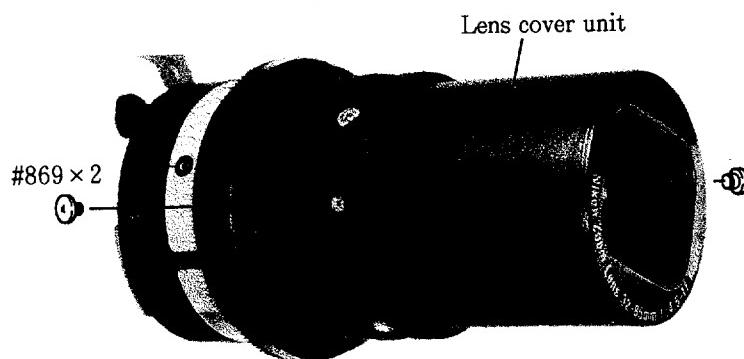
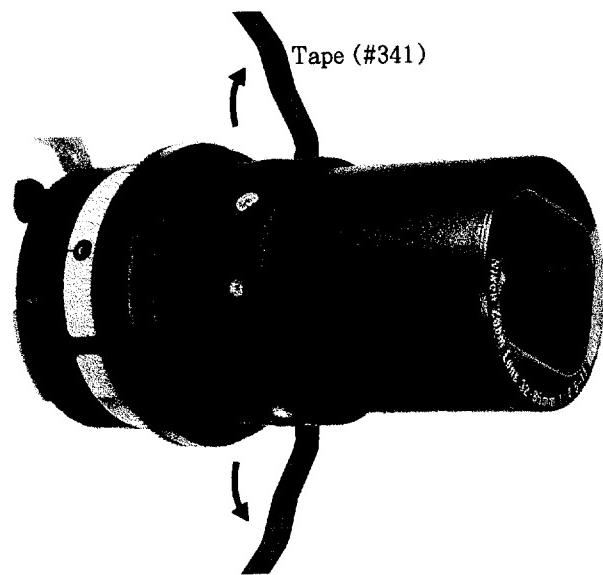


LENS BARREL GROUP

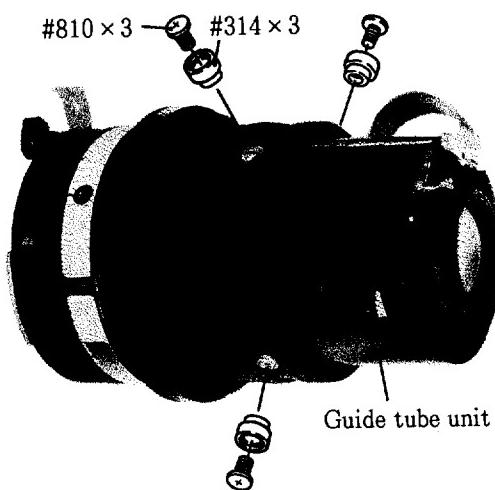


Peel off the lens barrel base plate from the shutter FPC and unfasten screw #516. And separate the lens barrel group from the lens barrel base plate.

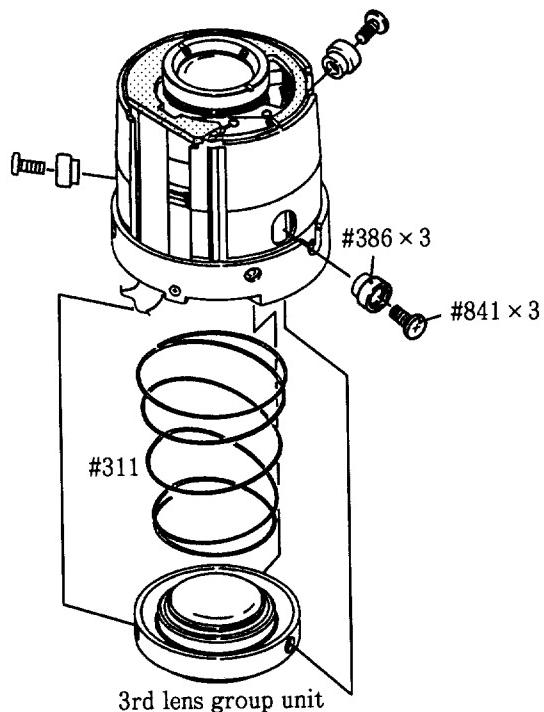
LENS COVER UNIT



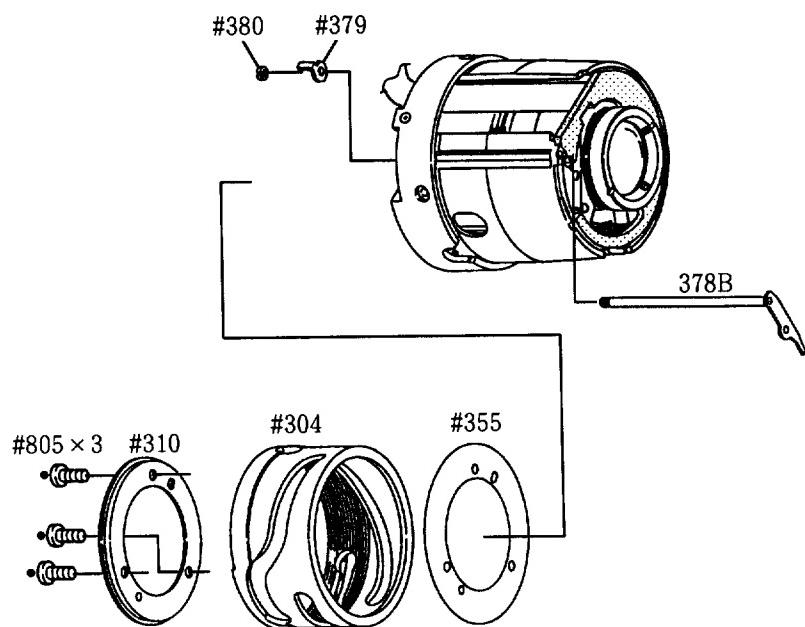
GUIDE TUBE UNIT

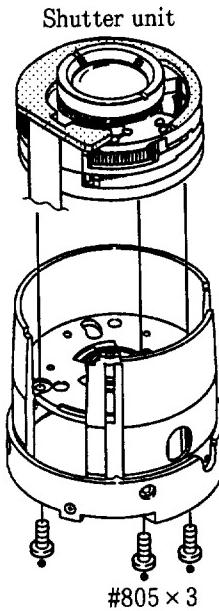
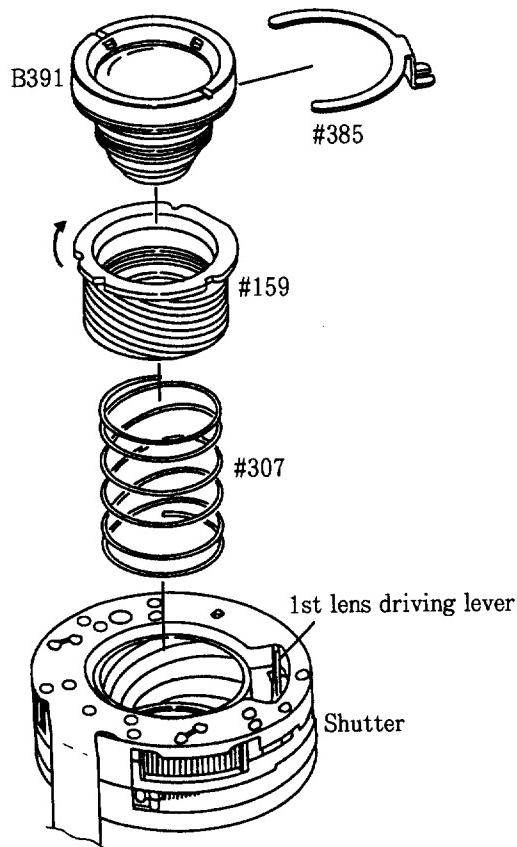


3rd LENS GROUP UNIT



3rd CAM RING #304, LENS COVER SHAFT 378B



SHUTTER UNIT**1st LENS GROUP UNIT**

- Remove adhesive agent on focus ring #385 and 1st lens group unit to make the 1st lens group free.

- Secure focus ring #385 and rotate #159 and B391 together clockwise to remove.

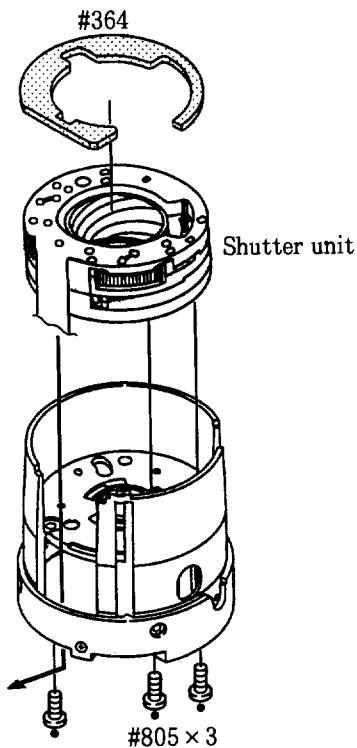
Note: When separating focus ring #385 from the 1st lens driving lever, do not bend the fork of focus ring #385 inward.

ASSEMBLING/ADJUSTMENT

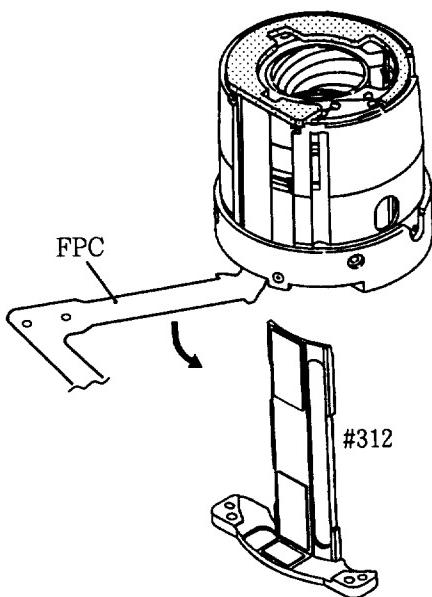
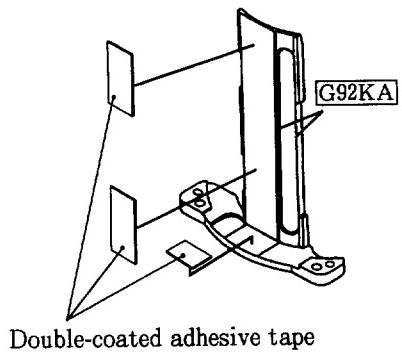
Shutter unit	A 1
Shutter FPC	A 1
3rd cam ring, lens cover shaft	A 2
3rd lens group unit	A 2
Outer cam ring unit	A 3
Guide tube unit	A 3
Lens barrel group	A 4
Linear key, clutch	A 5
Helicoid SW	A 5
Helicoid motor unit, joint gear group	A 6
Retainig ring	A 6
W/R motor group, panorama lever unit, small parts of rear body	A 7
W/R gear group	A 8
Connecting FPC	A 9
Aligning of rear body and lens barrel unit	A10
Flash base plate unit, amp base plate unit	A11
Viewfinder group	A12
AF unit	A13
Main condenser	A14
Camera back	A14
Adjustment viewfinder cam position	A15
1st lens group unit	A15
Adjustment of back focus	A16
Adjustment at both ends of focal length	A17
Adjusement of shift	A18
Lens cover unit	A19
Press-contact between the connecting FPC and the amp base plate	A20
Front cover	A20
Rear cover	A21
Bottom cover	A21

ASSEMBLING / ADJUSTMENT

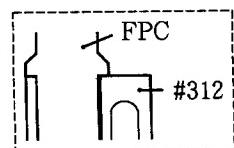
SHUTTER UNIT



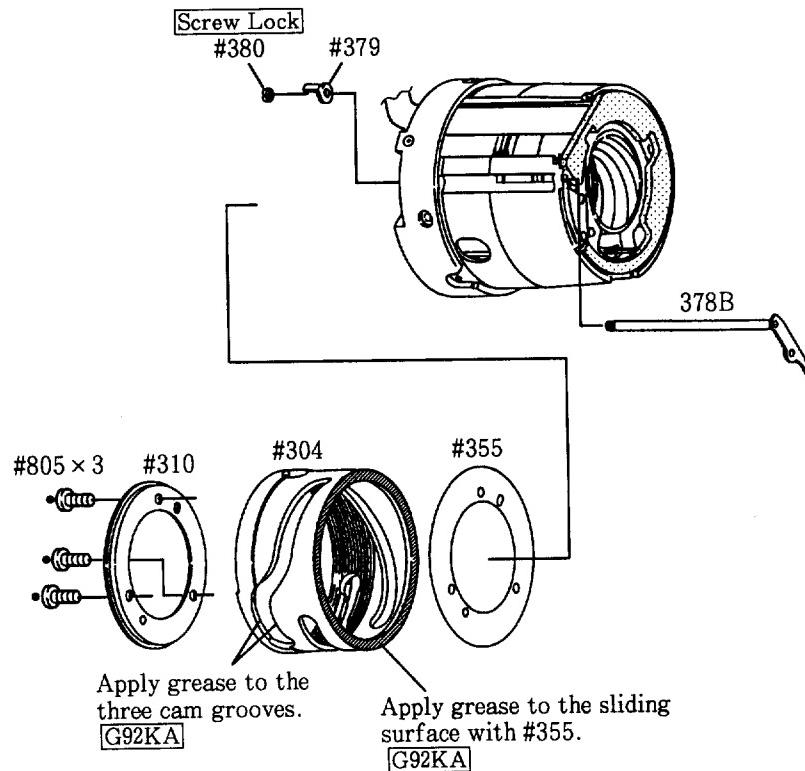
SHUTTER FPC



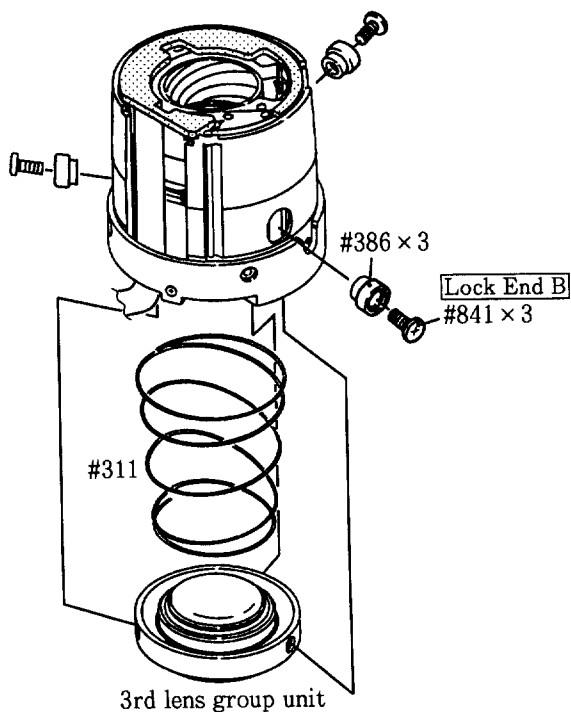
Note: In sticking the FPC
Stick it at the position
shown by the below figure.



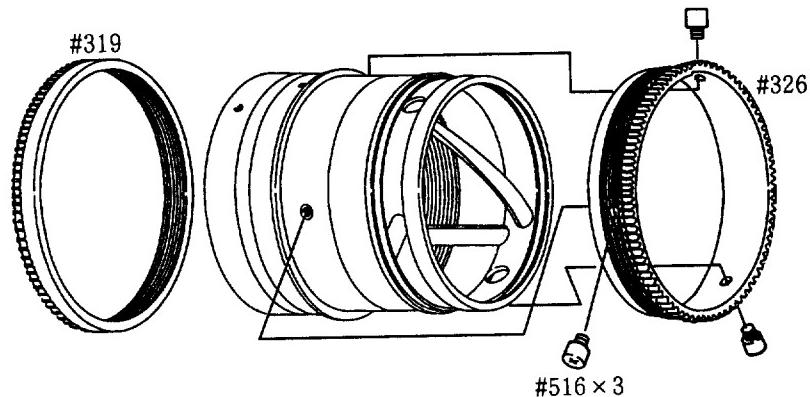
3rd CAM RING #304, LENS COVER SHAFT 378B



3rd LENS GROUP UNIT

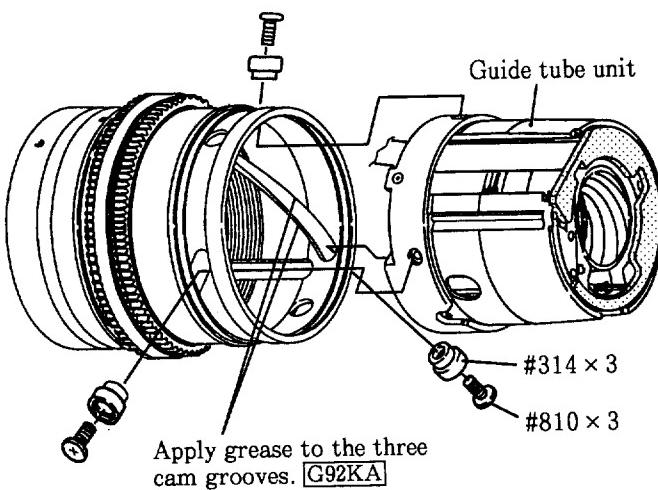


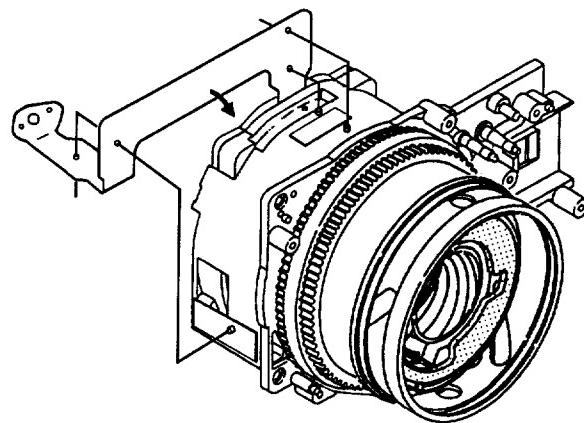
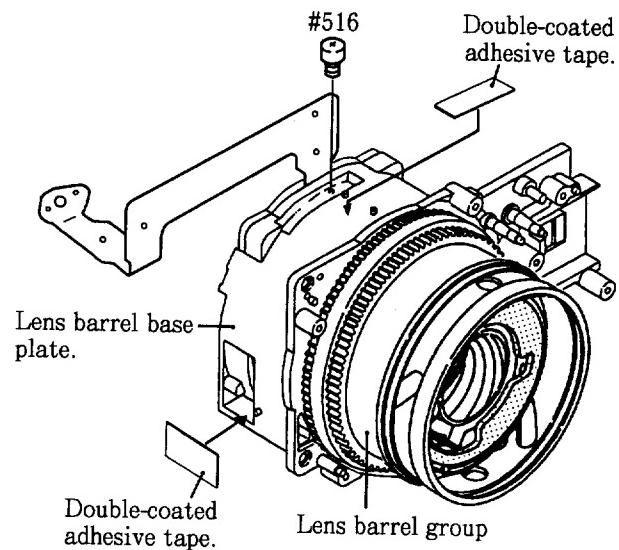
OUTER CAM RING UNIT



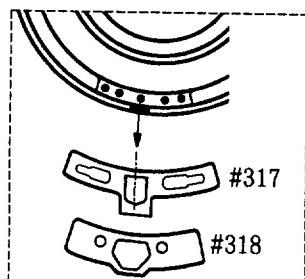
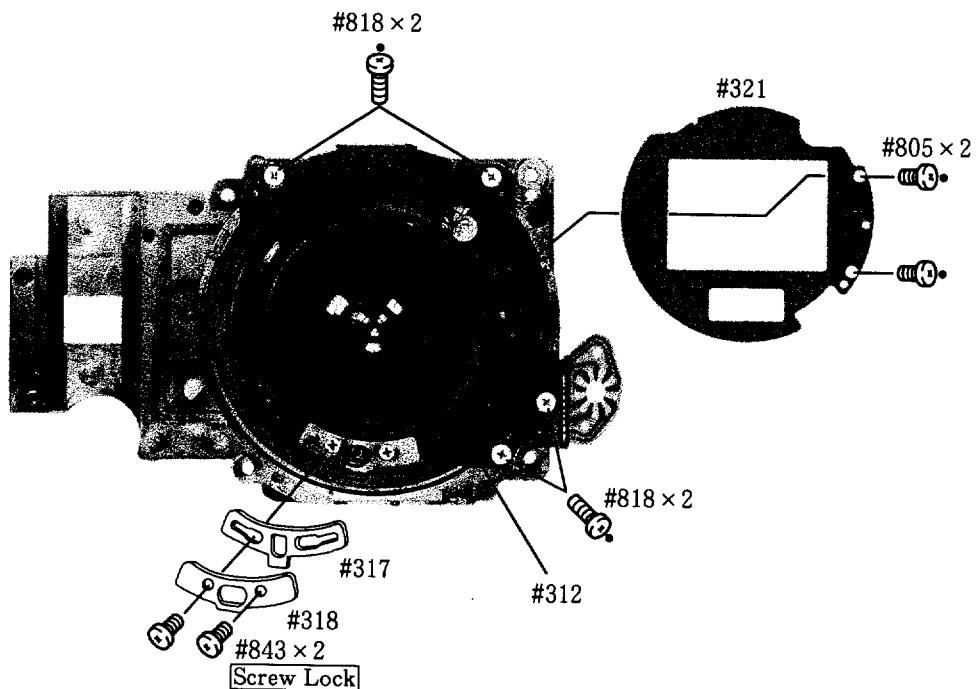
- ① Attach the #326 with screws #516 x 3.
- ② Screw down the sift-ring #319. (It is the position returned one rotate-half from the position it was screwed down)

GUIDE TUBE UNIT



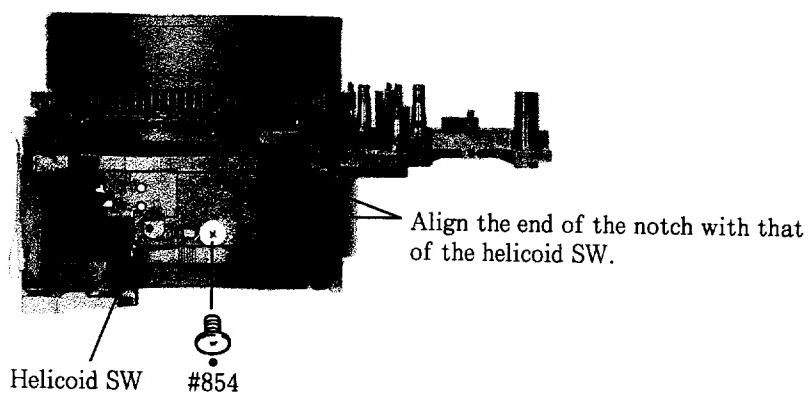
LENS BARREL GROUP

LINEAR KEY #312, #313, CLUTCH #317

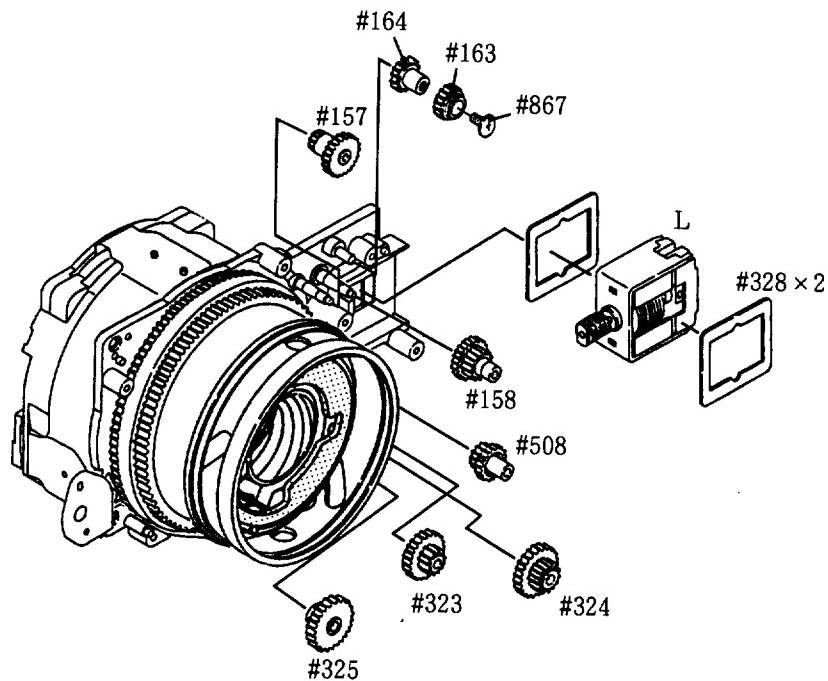


- When the clutch #317 and #318 are attached, connect the middle hole with the center of #317 as shown by the left figure.

HELICOID SW

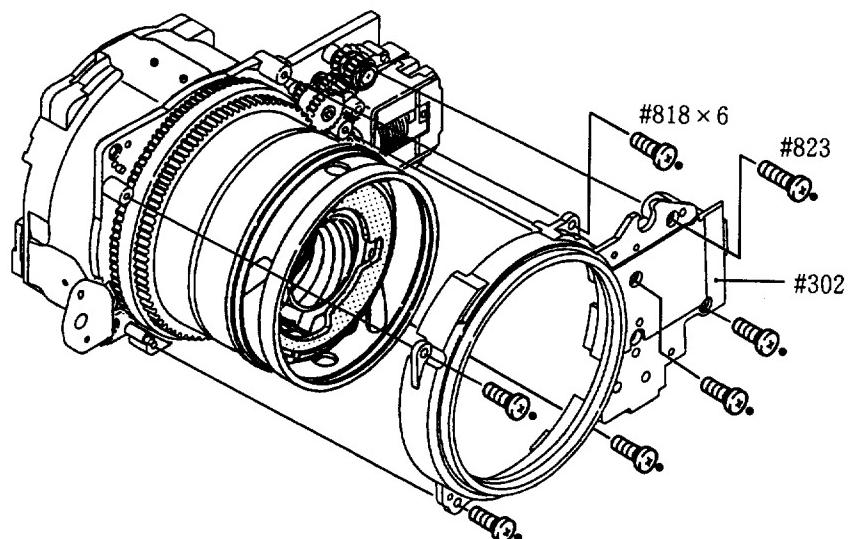


HELICOID MOTOR UNIT, JOINT GEAR GROUP

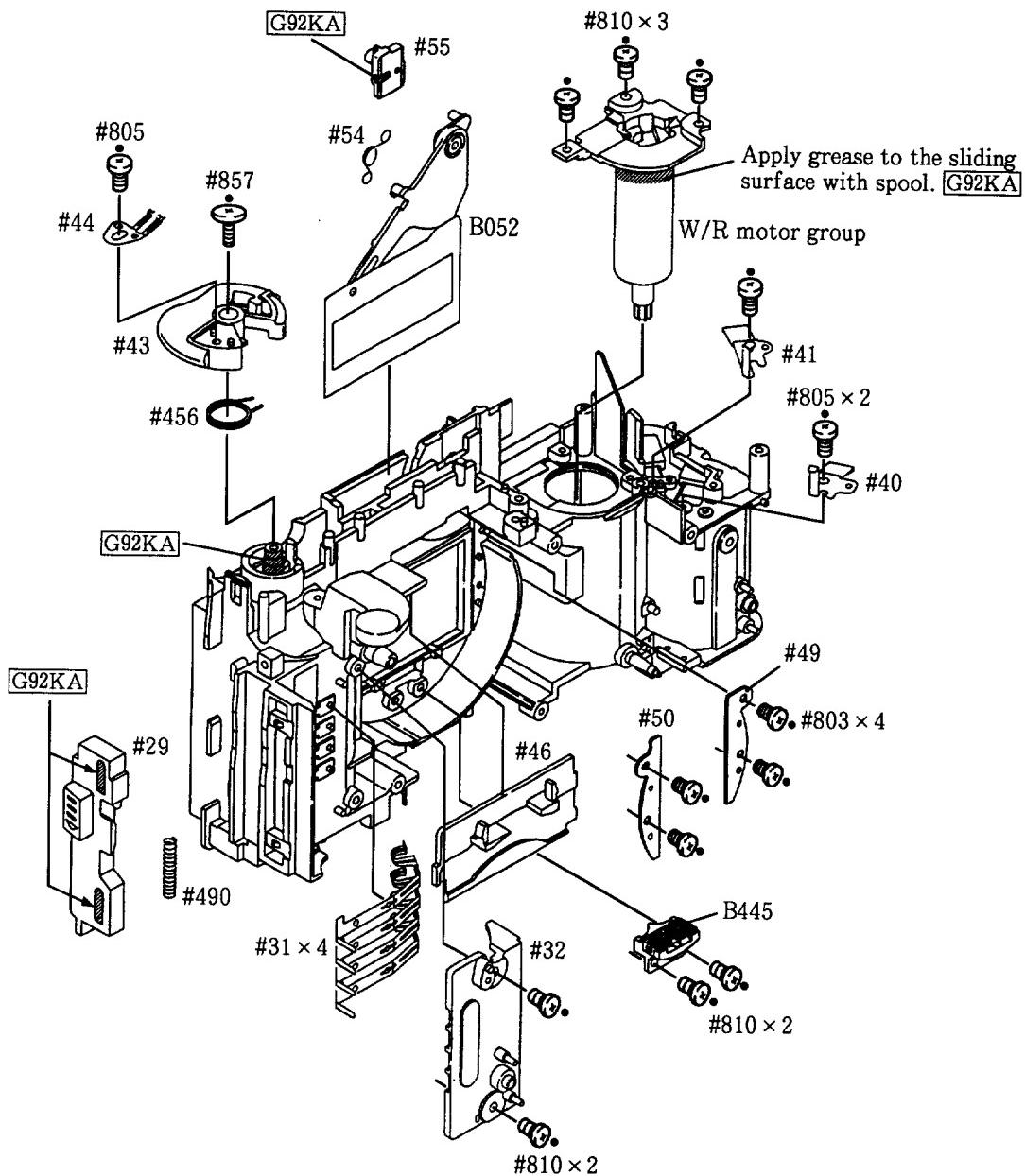


- Apply slightly grease G92KA to each gear and gear shaft.

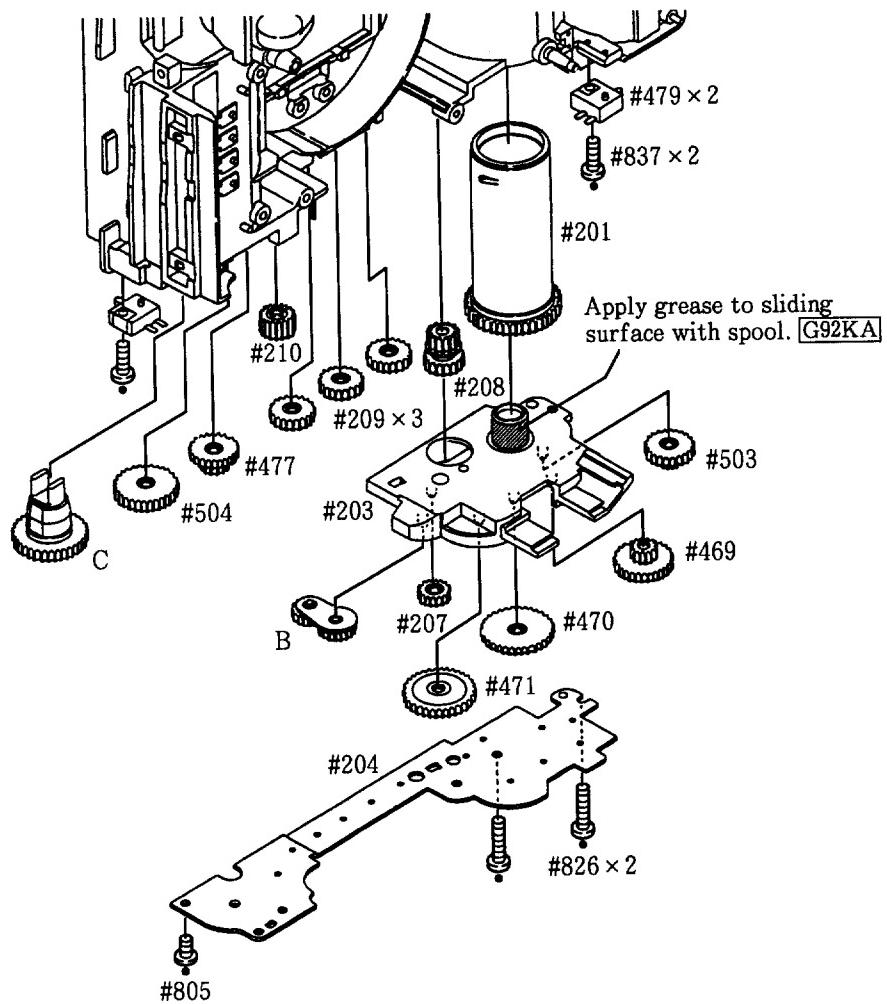
RETAINING RING #302



W/R MOTOR GROUP, PANORAMA LEVER UNIT, SMALL PARTS OF REAR BODY

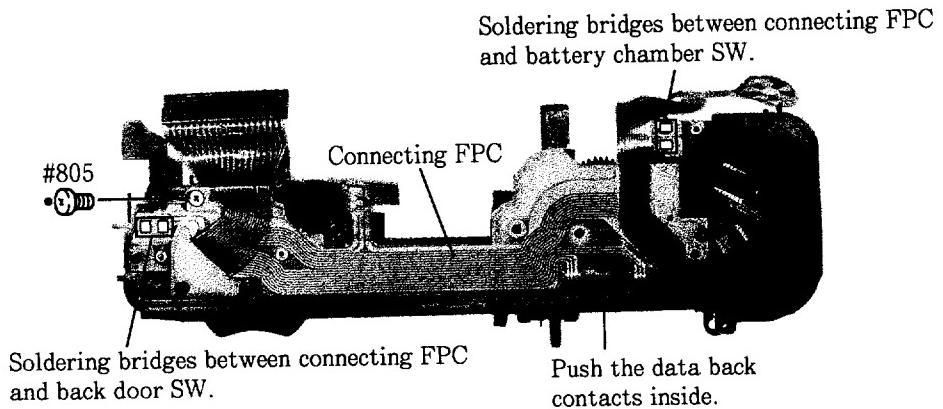
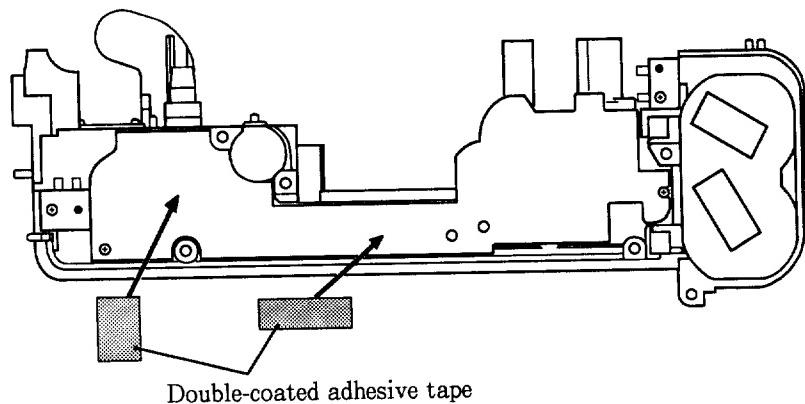
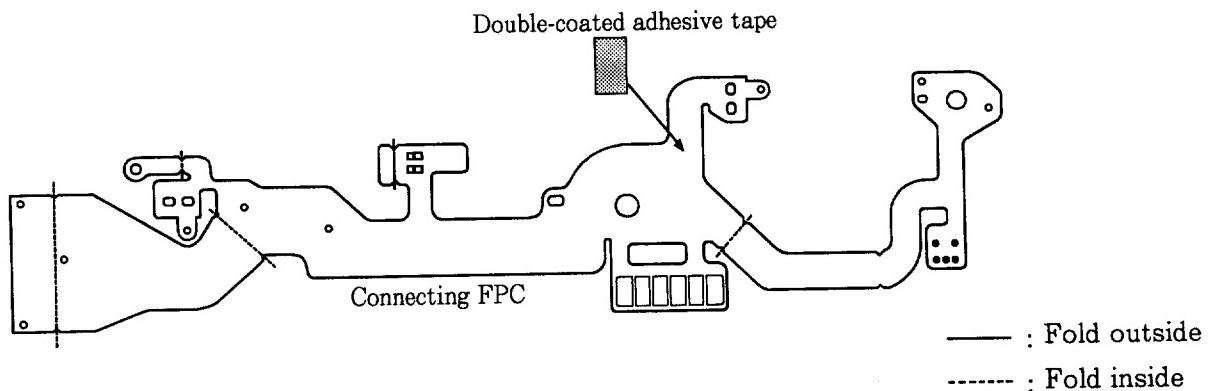


W/R GEAR GROUP

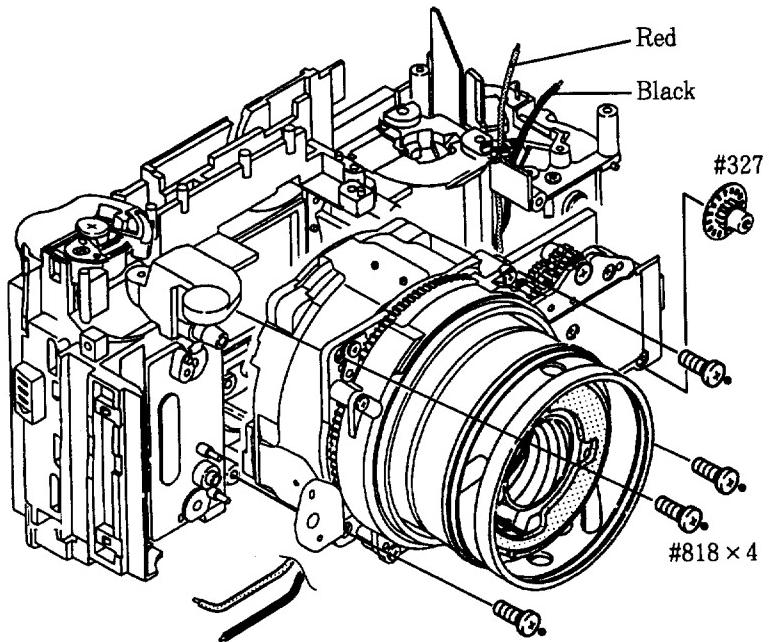


- Apply slightly grease G92KA to each gear and gear shaft.

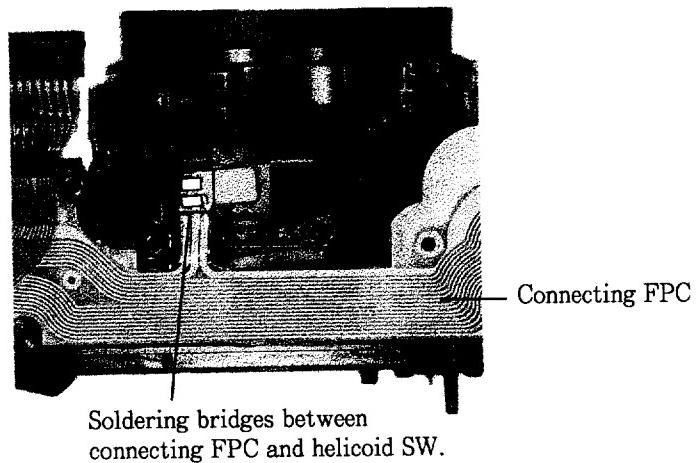
CONNECTING FPC



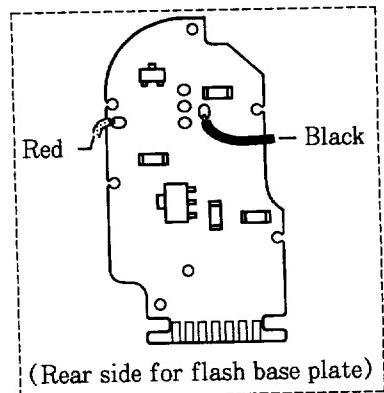
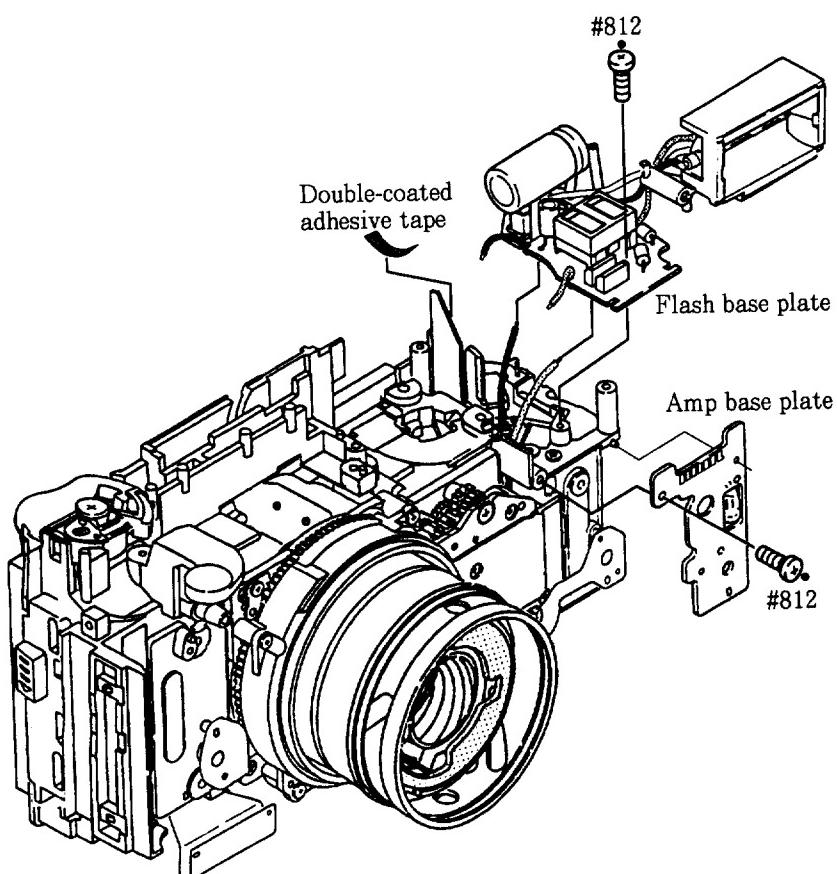
ALIGNING OF REAR BODY AND LENS BARREL UNIT



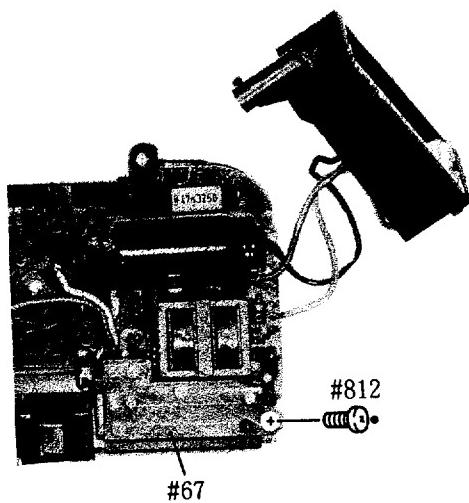
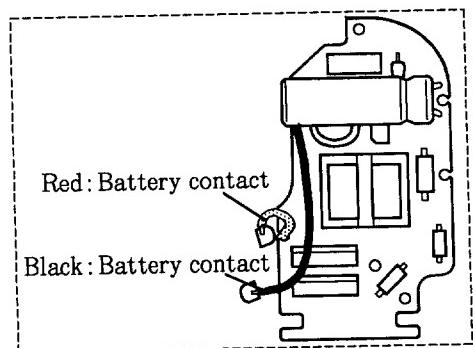
- Pass red and black wires through as shown in the figure.
Align the rear body with the lens barrel unit while taking care of the FPC and other wires.



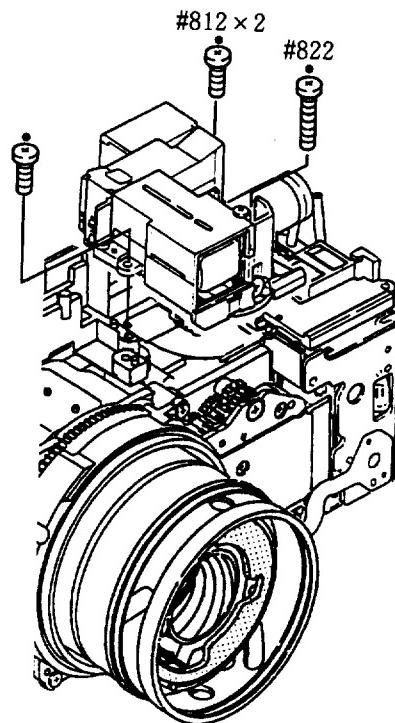
FLASH BASE PLATE UNIT, AMP BASE PLATE UNIT



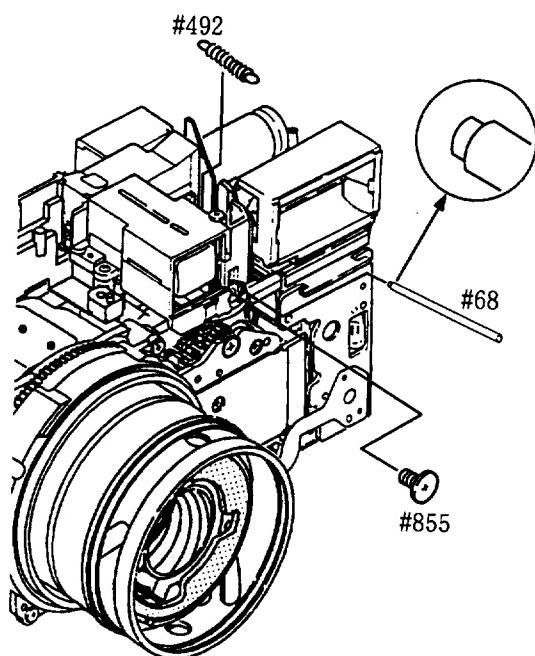
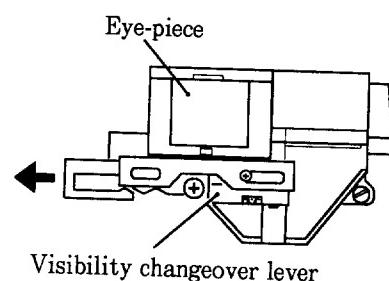
(Rear side for flash base plate)



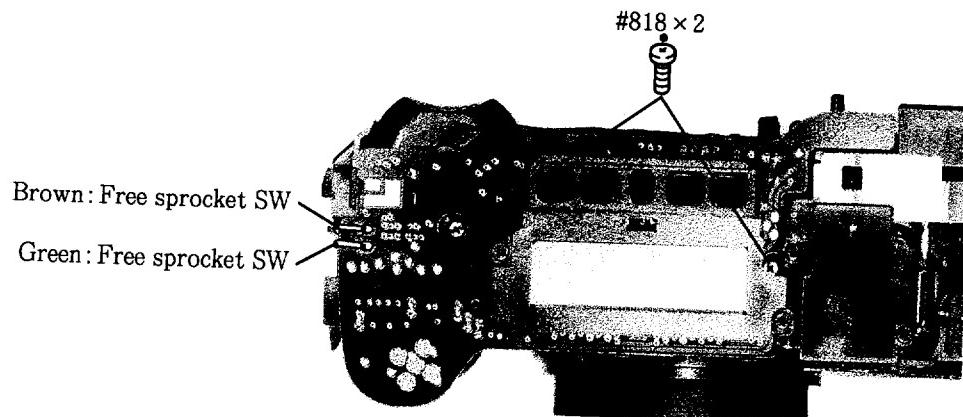
VIEWFINDER GROUP



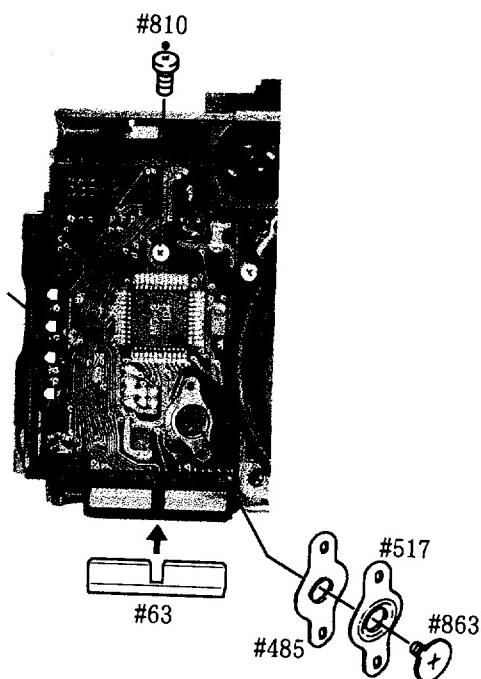
Reference: Viewfinder group can easily be mounted when the visibility changeover lever comes to the -1DP position. (Refer to the figure below)



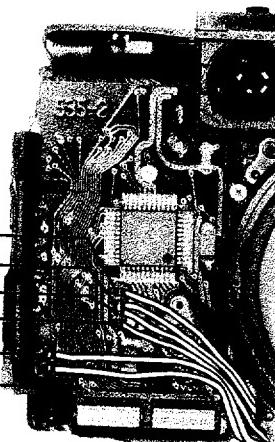
AF UNIT



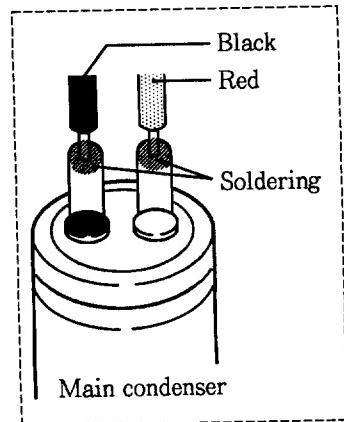
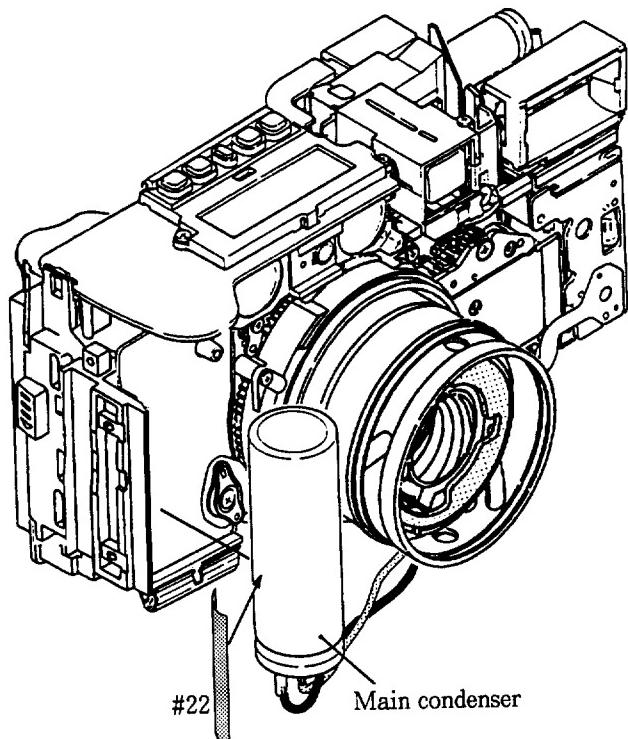
Soldering bridges between
MD base plate and DX
contacts.



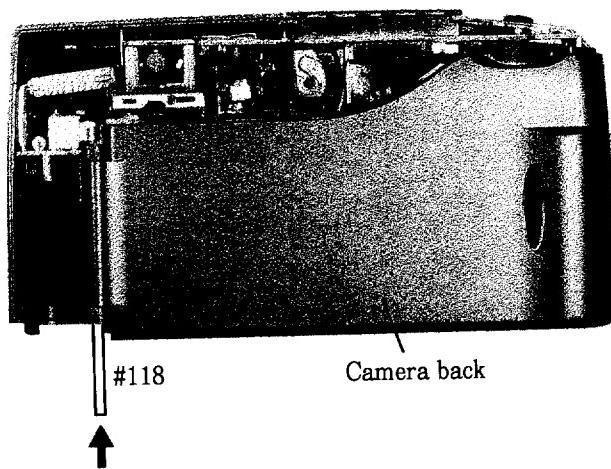
Yellow: Film advance motor
Pink: Helicoid motor
green: Film advance motor
Blue: Helicoid motor
White: Battery contact (-)
Orange: Battery contact (+)



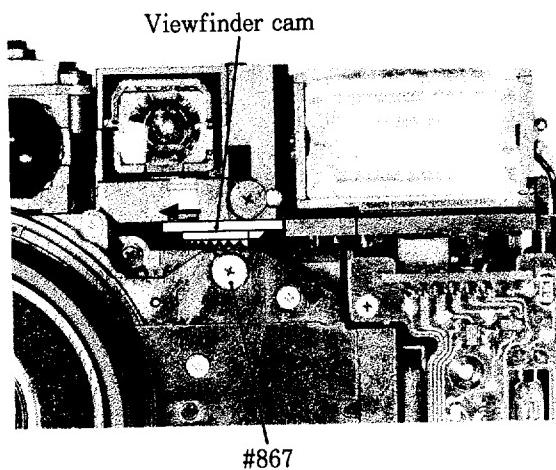
MAIN CONDENSER



CAMERA BACK



ADJUSTMENT VIEWFINDER CAM POSITION



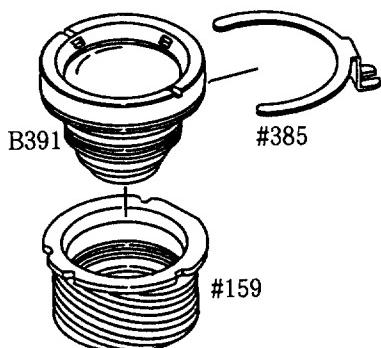
① Loosen the #867.

② Install the batteries and let lens barrel be put in reset position.

③ Rotate the viewfinder cam in the direction indicated by the arrow until it stops.

④ Tighten the #867.

1st LENS GROUP

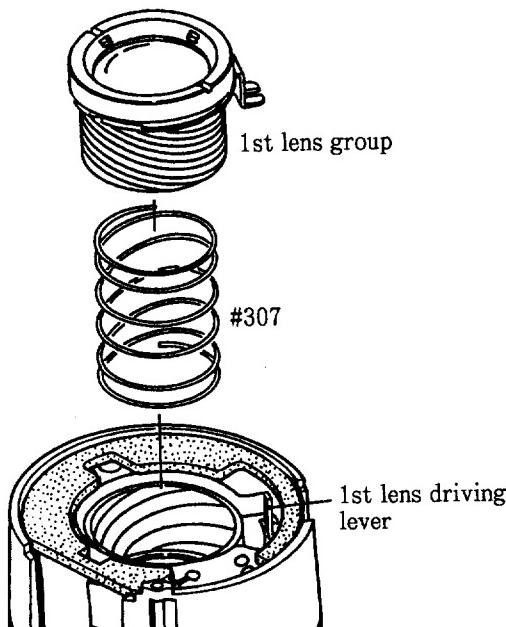


① Attach 1st lens group unit B391 with focus ring #385 and then unite #159 with them.

② Mount the 1st lens group energize spring #307.

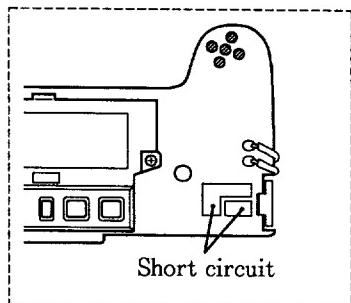
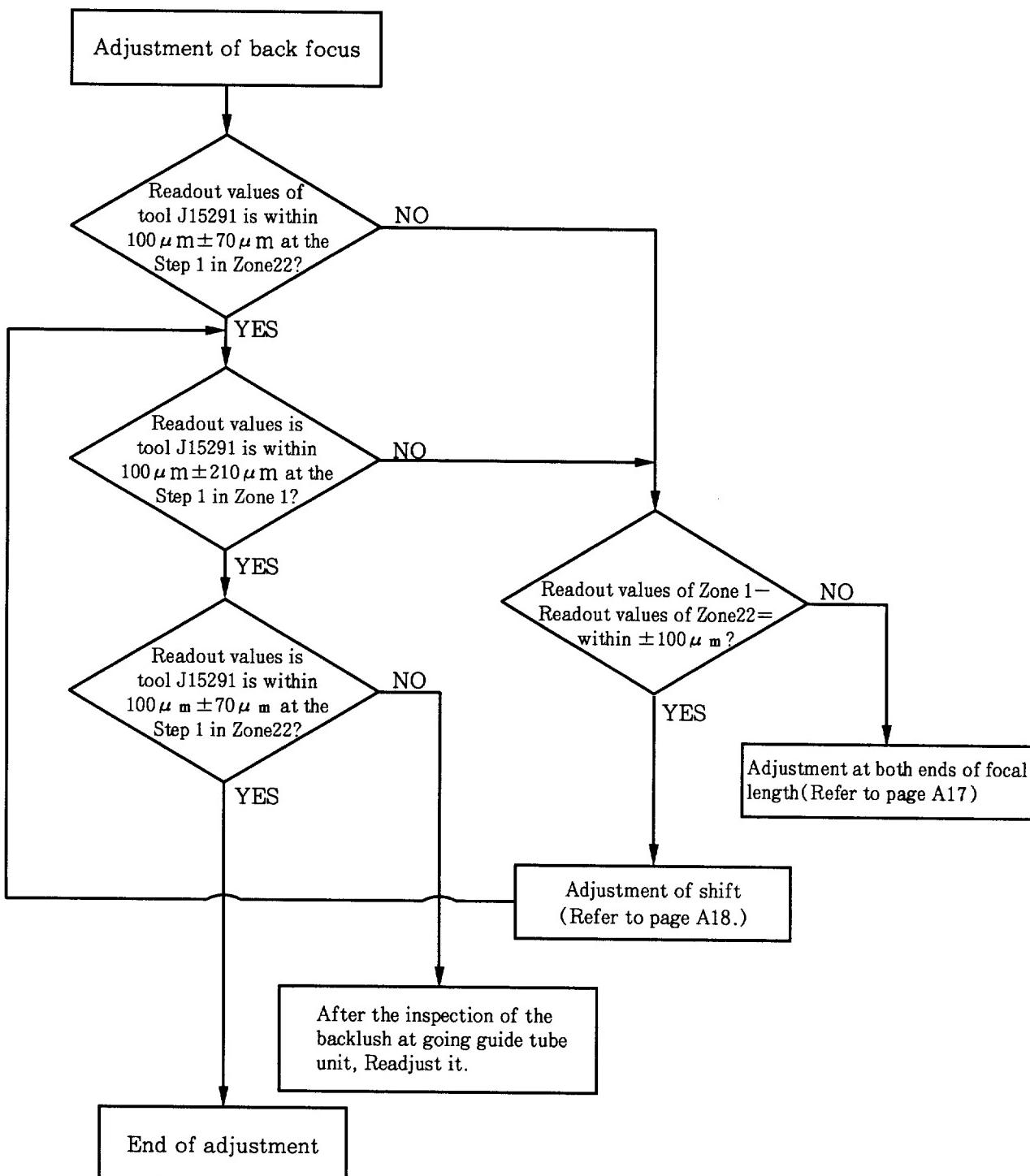
③ Rotating the 1st lens group counter clockwise attach it.

④ Hold the focus ring to prevent it from rotating and screw down the 1st lens group unit counter clockwise to the position when it stops.



Note: Check to be sure that the 1st lens driving lever should be in the fork of the focus ring.

ADJUSTMENT OF BACK FOCUS



Note: Before the back focus is adjusted, be sure to short circuit of the main switch.

1. Adjustment at both ends of focal length**Standard:**

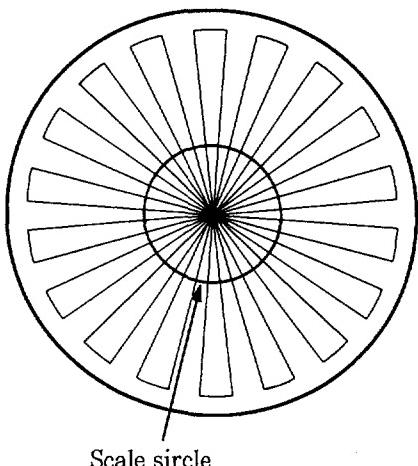
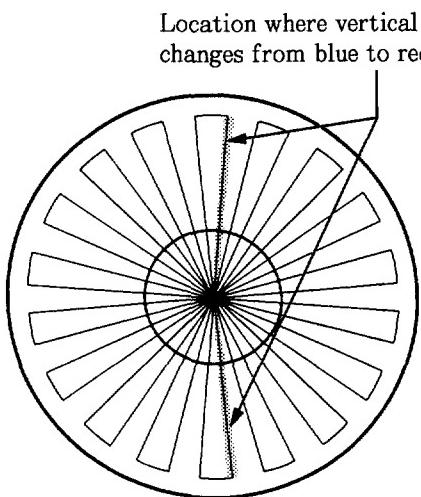
The difference between the Step 1 in Zone22 (Wide end) and the Step 1 in Zone 1 (Tele ends) is within $\pm 100 \mu\text{m}$.

- ① Rotate the objective lens of the collimator (J19019) to set the scale to -0.9mm (minus 9 calibration).
*Do not rotate the objective lens afterward.
- ② Set the scale of the FFD adjustment micro stand (J15291) to "0".
- ③ Set the camera to Zone22 (Wide end) and Bulb in accord with Step 1 in manual inspection mode.
- ④ Rotate the spindle of the tool J15291 to focus the collimator and readout the value of the tool J15291.
Focus the collimator when the screen color of the collimator changes from blue to red.
(See the figure on the left.)
- ⑤ Set the camera to Zone 1 (Tele end), and to Bule at the Step 1 in manual inspection mode.
Focus the collimator and readout value of the tool J15291.
Focus is made at the in-focus position in the scale circle on the collimator.
- ⑥ If the difference between Zone22 (Wide end) and Zone 1 (Tele end) is more than $100 \mu\text{m}$, set the value of the tool J15291 to one calculated from the following equation.

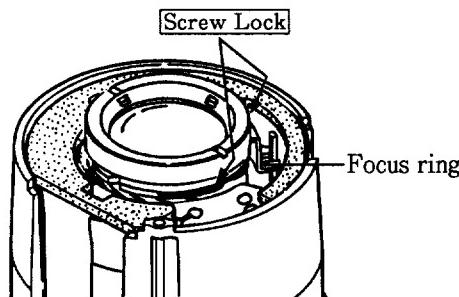
$$B = W + 1.16 \times (W - T)$$

where

B : Set position of the tool J15291 (μm)
 W: Readout value of Zone22 (μm)
 T: Readout value of Zone 1 (μm)



- ⑦ Set the camera Zone 22 (Wide end), rotate the 1st lens group unit to focus the collimator.



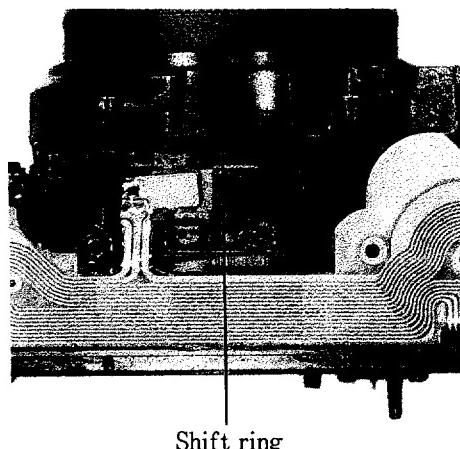
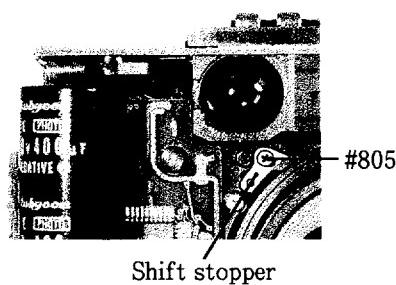
The direction of 1st group rotation	The color of screen in the collimator
Clockwise	Blue will be deep
Counter clockwise	Red will be deep

- ⑧ Recheck the values at Tele end and Wide end positions. If these values are out of standard, repeat steps ⑤ to ⑦.

- ⑨ After adjustment, secure the focus ring with the Screw Lock (two portions).

*As the above adjustment at both ends of focal length are easily made by using the adjustment software, make adjustments as indicated.

2. Adjustment of shift



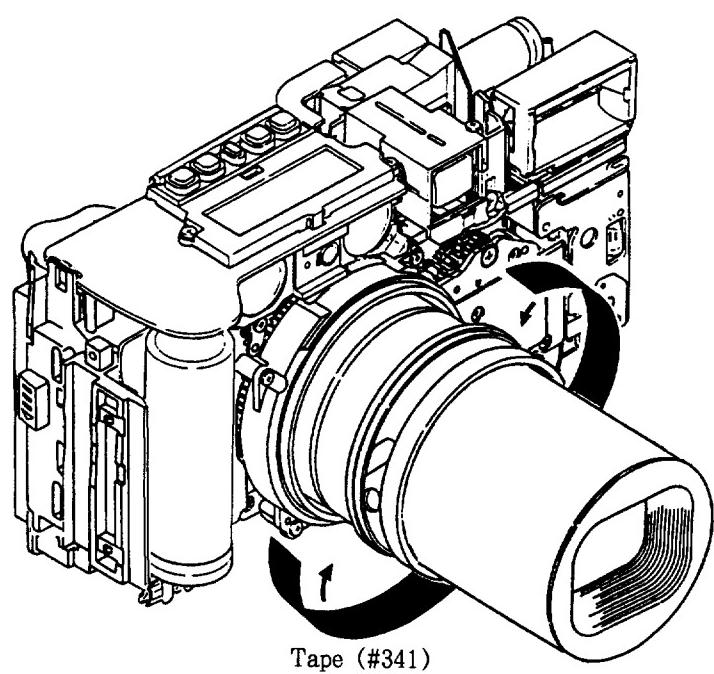
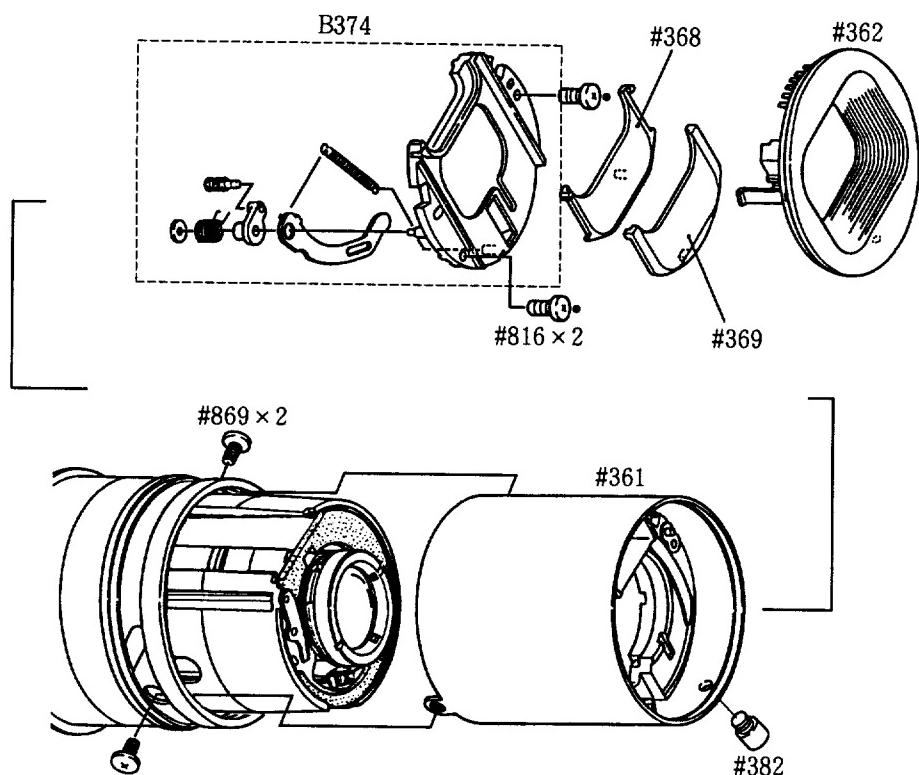
- ① Readout the value of Step 1 in Zone22 (Wide end).

Standard value: $100 \mu\text{m} \pm 70 \mu\text{m}$
 $(+30 \mu\text{m} \sim +170 \mu\text{m})$

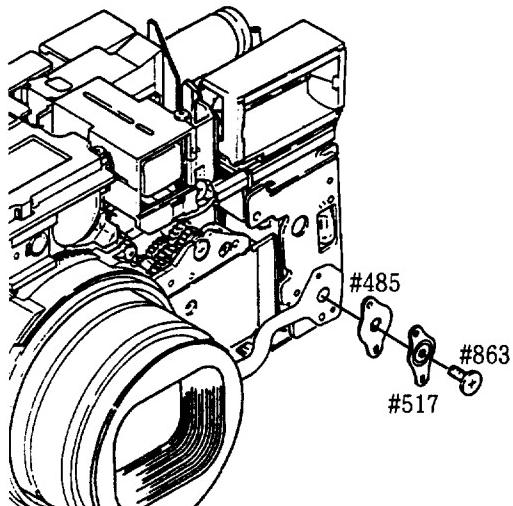
- ② If out of the standard range, move the shift ring to adjust. (The amount of change per shift stopper 1 cog is about $6 \mu\text{m}$)

*When all adjustment of back focus have been completed, fix the shift stopper with screw #805.

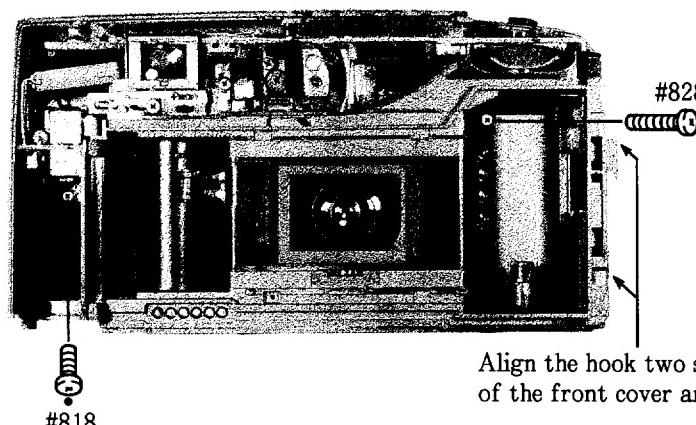
LENS COVER UNIT



PRESS-CONTACT BETWEEN THE CONNECTING FPC AND THE AMP BASE PLATE

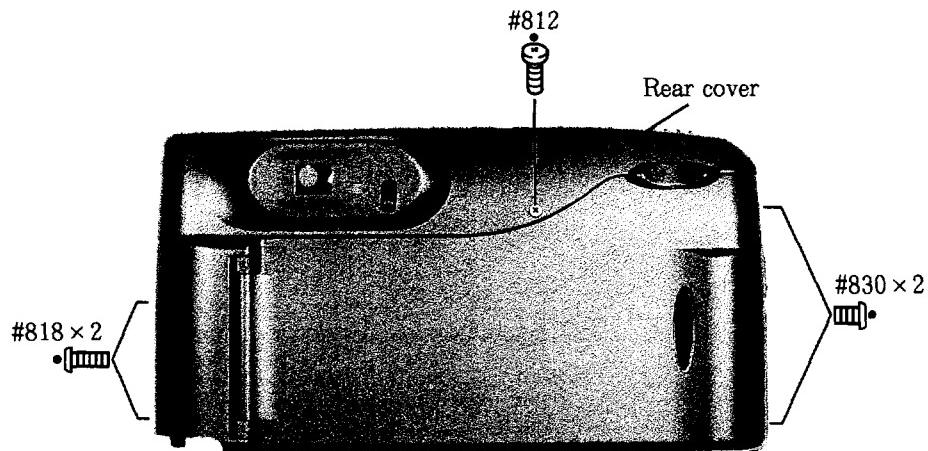


FRONT COVER

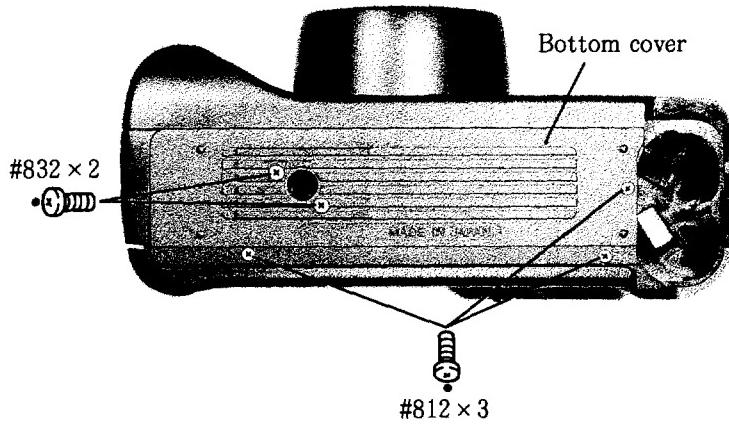


Align the hook two sections
of the front cover and the body.

- Attach the shutter release button and light-baffle ring to the front cover, and mount the front cover.

REAR COVER

Note: When mounting the rear cover, do not bend the power SW brush.

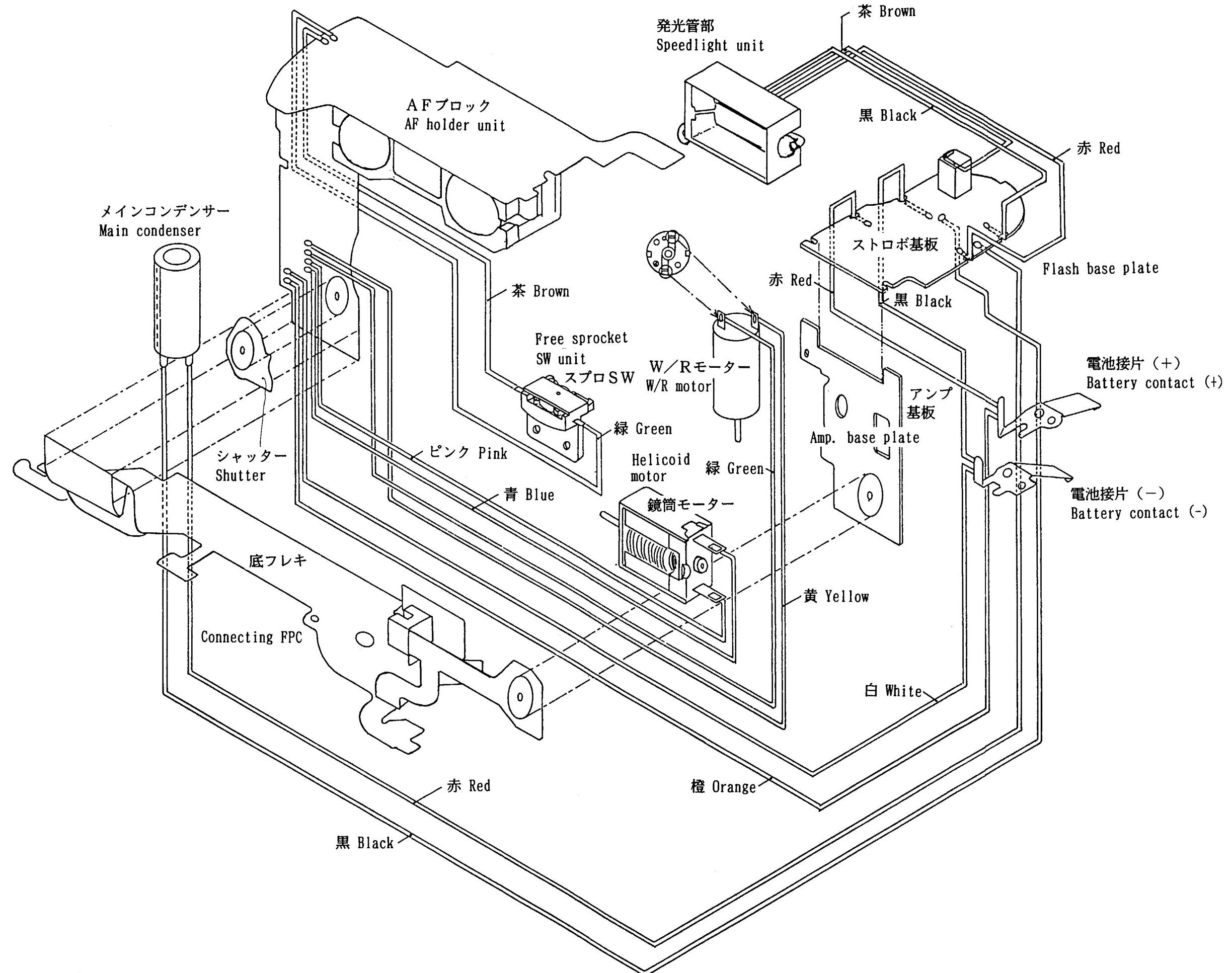
BOTTOM COVER

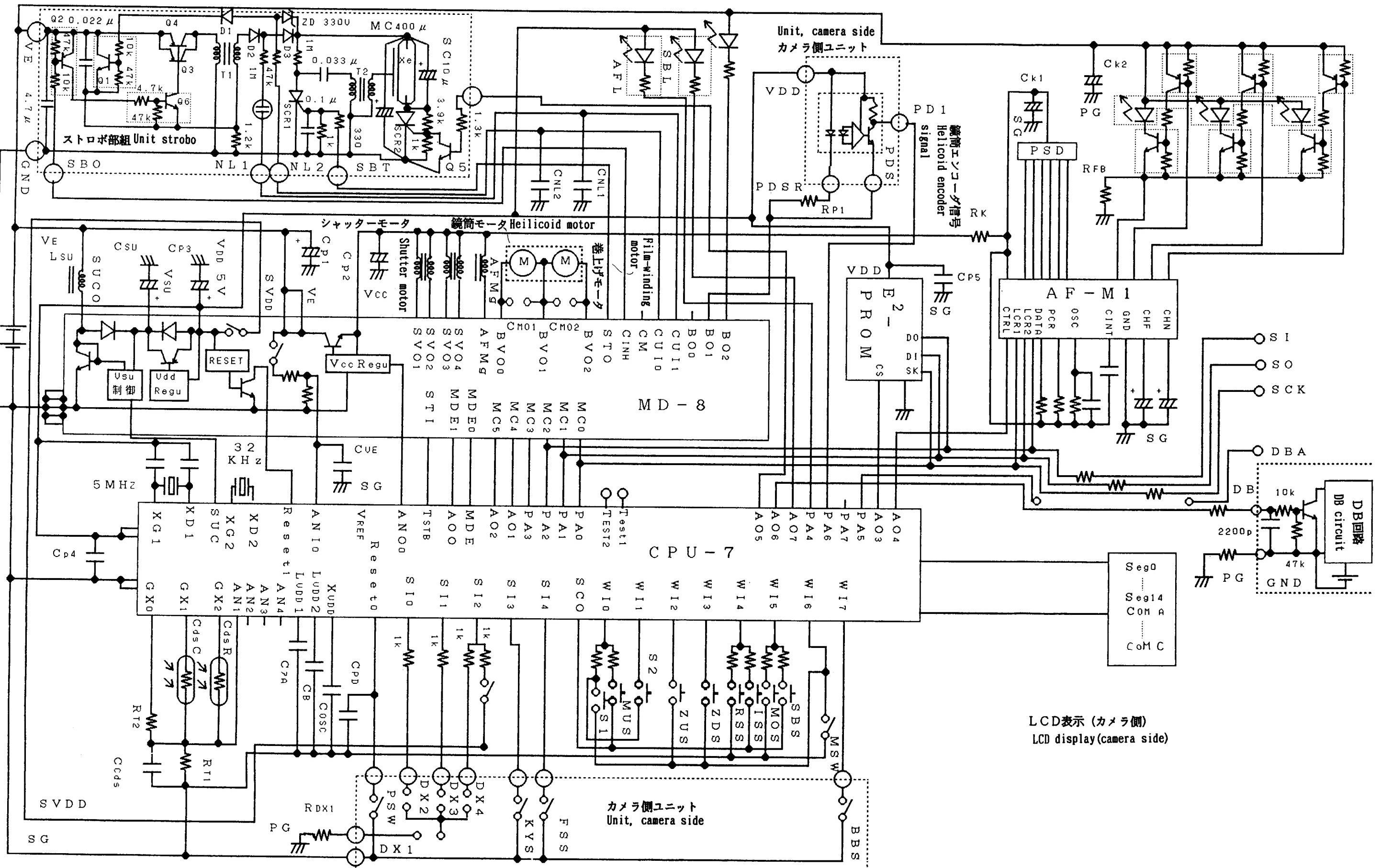
電気編

実体配線図	E 1
回路図	E 2
S B 回路図	E 3
ストロボ基板	E 4
アンプ基板	E 6

E l e c t r i c C i r c u i t

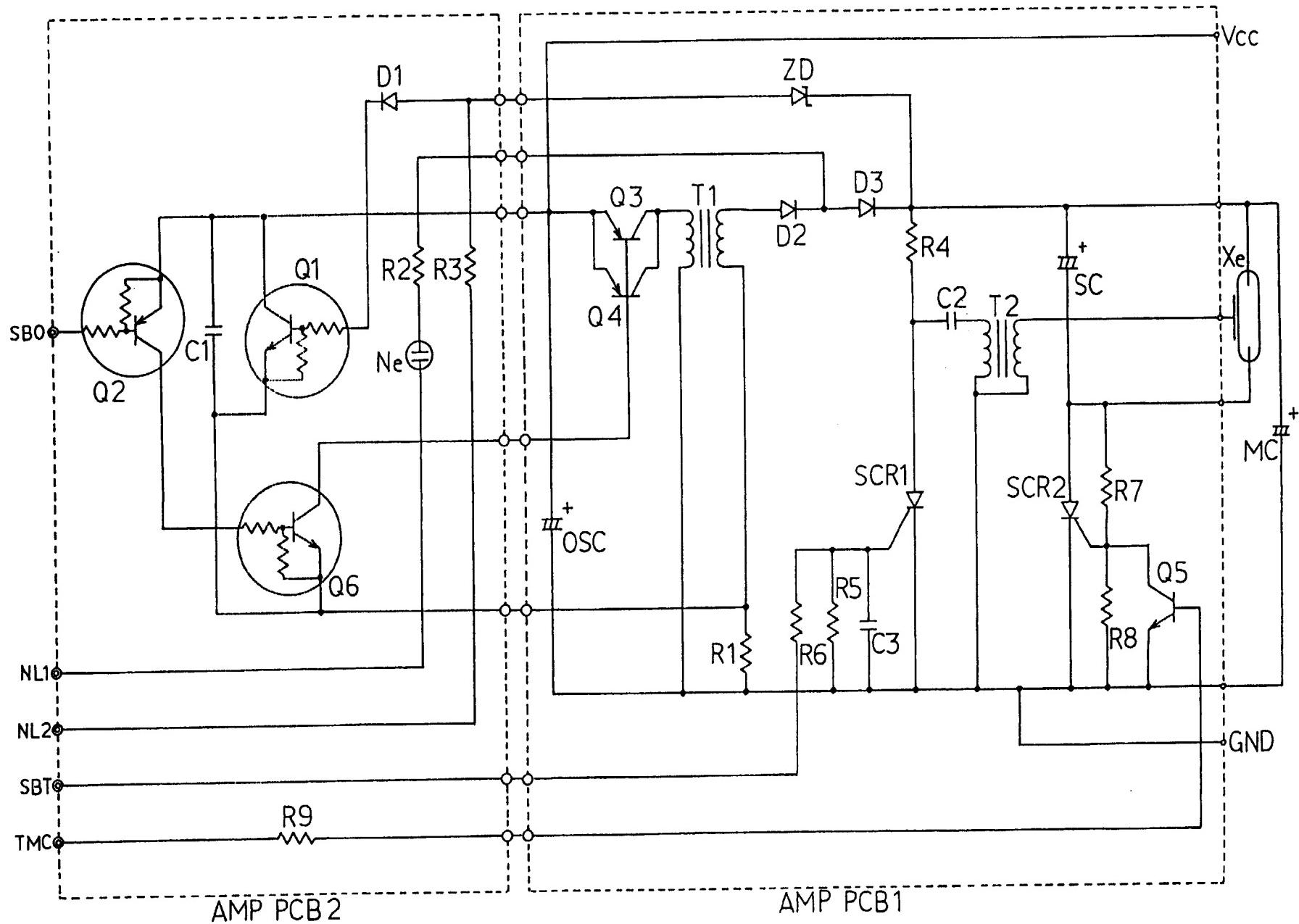
WIRING DIAGRAM	E 1
CIRCUIT DIAGRAM	E 2
SB CIRCUIT DIAGRAM	E 3
FLASH P. C. B.	E 4
AMP P. C. B.	E 6



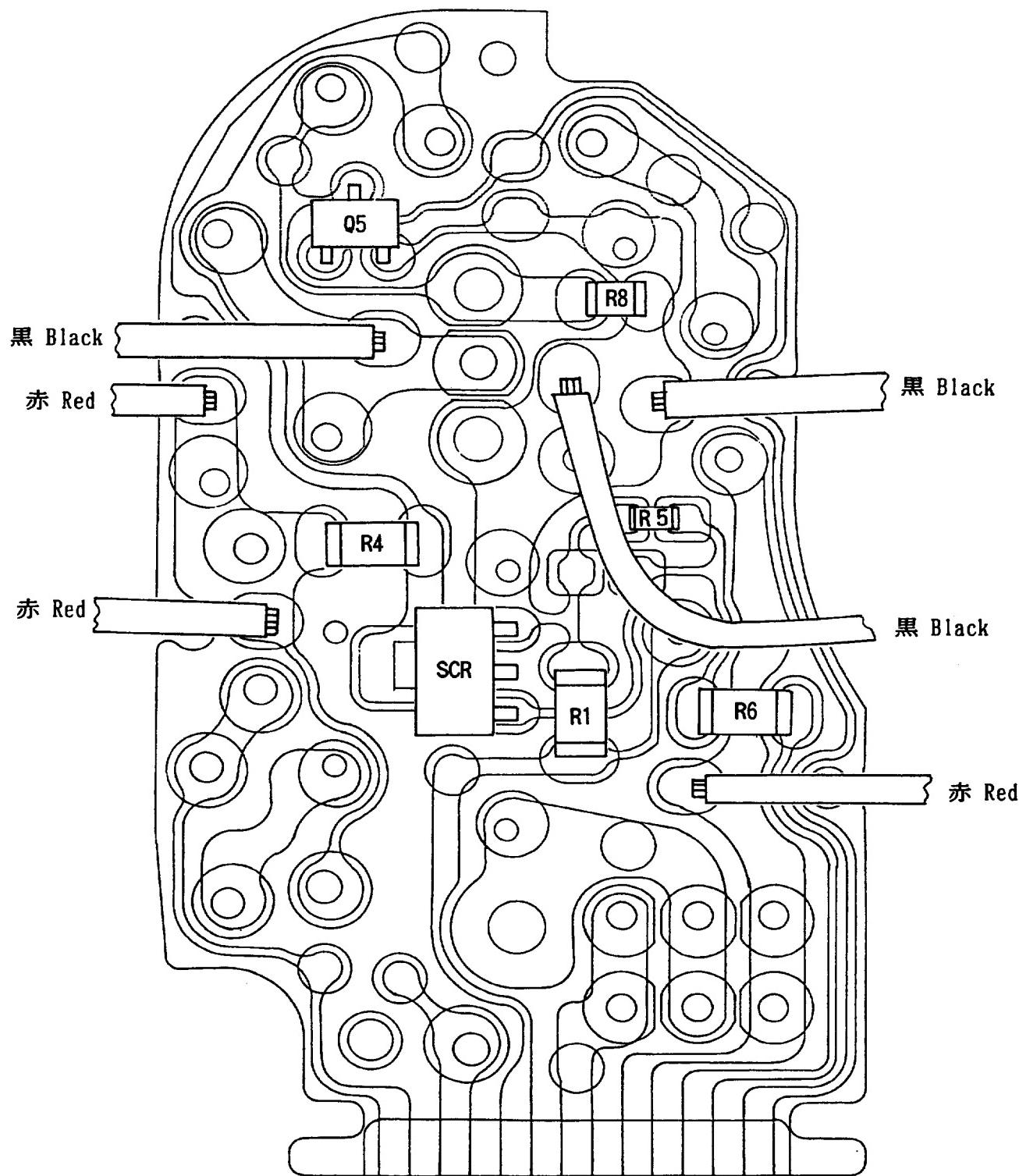


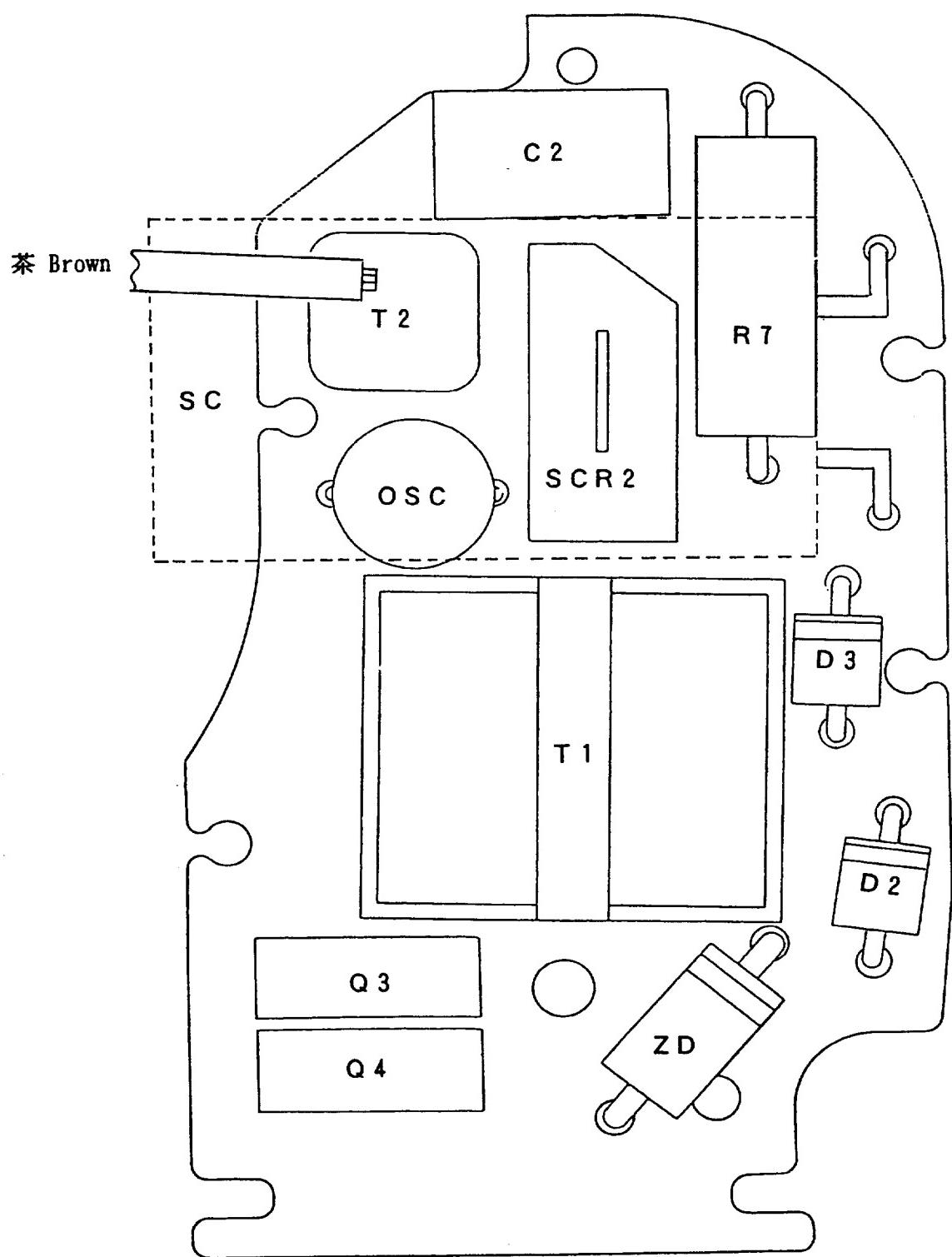
S B 回路圖
SB CIRCUIT DIAGRAM

FCA17001-R. 3316. A

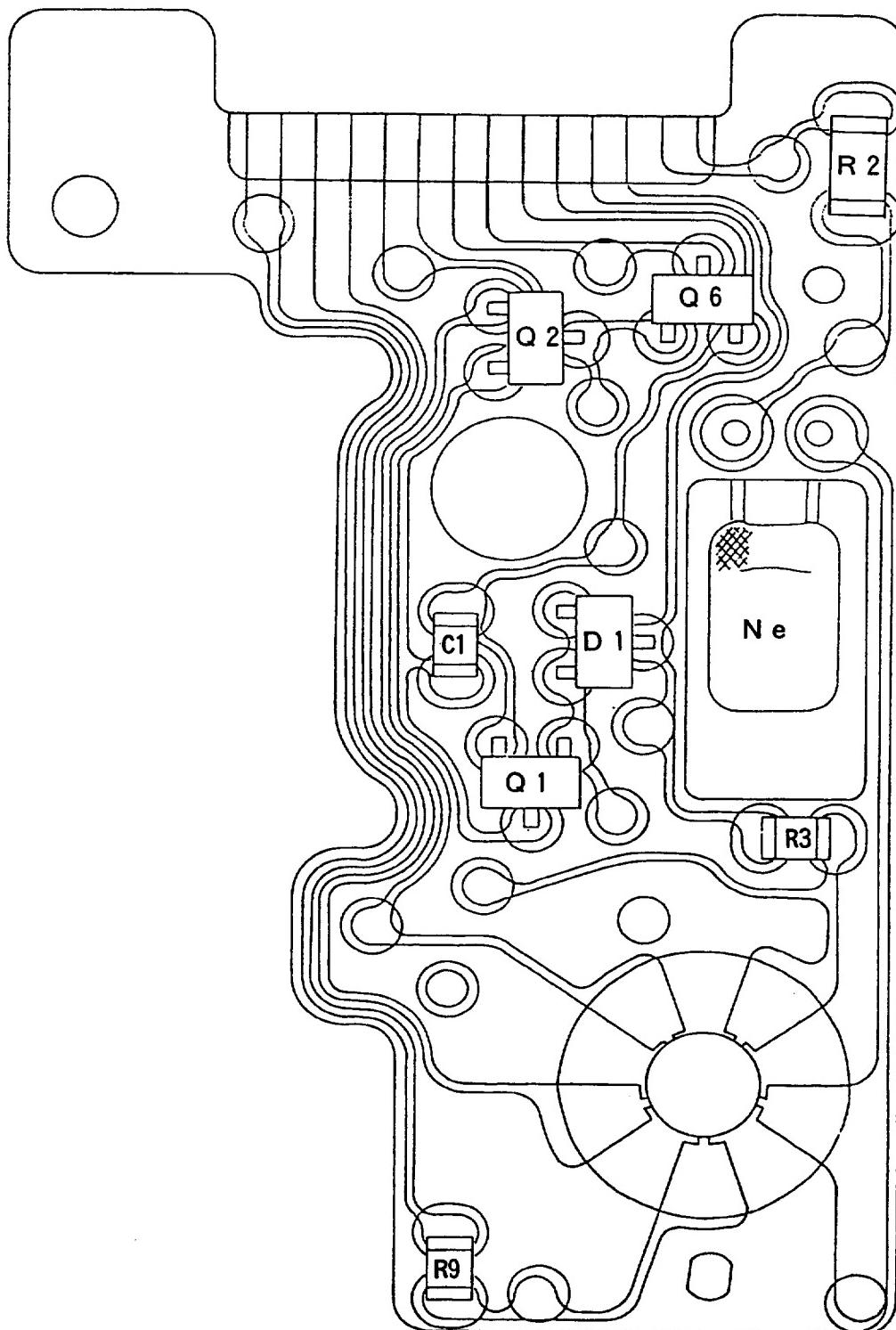


- E 3 • TW Zoom 85 -

ストロボ基板
FLASH P.C.B.



アンプ基板
AMP. P. C. B.



INSPECTION STANDARD FOR REPAIR & TOOLS

[1] INSPECTION STANDARD FOR REPAIR	R 1
[2] TOOLS	T 1

CONDITION FOR INSPECTION

Normal temperature: $20 \pm 5^\circ C$ (Relative humidity: $65 \pm 20\%$)

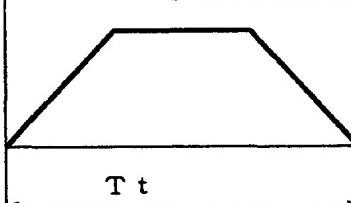
Power source: $6.0 \pm 0.03V$, 2A or more at 1.0Ω load

Light source: Surface light source $2856^\circ K$

K coefficient: 1.3

[1] INSPECTION STANDARD

FCA17001-R.3316.A

	IETBM	STANDARD			TOOLS																																											
PRAMBS	Picture frame	Width: $24^{+0.3mm}_{-0.3mm}$ Length: $36^{+0.3mm}_{-0.3mm}$ Panorama width : more than 6.65mm at the center of frame.			Slide calipers Scale Film																																											
	Frame-to-frame space	0.5mm ~ 3.5mm																																														
	Frame position	Over 0.2mm between film perforation and frame. Inclination of frame is less than 0.15mm.																																														
AB ACCURACY	AB accuracy	Inspection result should meet the following conditions. (ISO 100)			BP-511N DC regulated power supply																																											
<table border="1"> <thead> <tr> <th colspan="2">Exposure value</th> <th>Allowance</th> <th>Exposure variation</th> <th>Difference of each EV</th> </tr> </thead> <tbody> <tr> <td>Z:22</td> <td>$6 \leq EV \leq 6.125$</td> <td>± 0.7 EV</td> <td>1.4EV</td> <td rowspan="3">Not to be inverted</td> </tr> <tr> <td>Z:01</td> <td>$7 \leq EV \leq 8.75$</td> <td>± 1.2 EV</td> <td>1.0EV</td> </tr> <tr> <td>Z:22</td> <td>$6.125 < EV \leq 9.125$</td> <td>± 1.2 EV</td> <td>1.0EV</td> </tr> <tr> <td>Z:01</td> <td>$8.75 < EV \leq 11.75$</td> <td>± 1.0 EV</td> <td>1.0EV</td> <td></td> </tr> <tr> <td>Z:22</td> <td>$9.125 \leq EV \leq 14.75$</td> <td>± 1.0 EV</td> <td>1.0EV</td> <td></td> </tr> <tr> <td>Z:01</td> <td>$11.75 \leq EV \leq 15.0$</td> <td>± 1.5 EV</td> <td>1.3EV</td> <td></td> </tr> <tr> <td>Z:21</td> <td>$15.0 \leq EV \leq 15.875$</td> <td>± 1.5 EV</td> <td>1.3EV</td> <td></td> </tr> <tr> <td>Z:01</td> <td>$15.0 \leq EV \leq 17.0$</td> <td>± 1.5 EV</td> <td>1.3EV</td> <td></td> </tr> </tbody> </table> <p>Allowance: Range of the values inspected five times Exposure variation: Difference between min. and max. values EV inspected five times Difference of each EV: Difference between average value of each EV inspected five times</p>						Exposure value		Allowance	Exposure variation	Difference of each EV	Z:22	$6 \leq EV \leq 6.125$	± 0.7 EV	1.4EV	Not to be inverted	Z:01	$7 \leq EV \leq 8.75$	± 1.2 EV	1.0EV	Z:22	$6.125 < EV \leq 9.125$	± 1.2 EV	1.0EV	Z:01	$8.75 < EV \leq 11.75$	± 1.0 EV	1.0EV		Z:22	$9.125 \leq EV \leq 14.75$	± 1.0 EV	1.0EV		Z:01	$11.75 \leq EV \leq 15.0$	± 1.5 EV	1.3EV		Z:21	$15.0 \leq EV \leq 15.875$	± 1.5 EV	1.3EV		Z:01	$15.0 \leq EV \leq 17.0$	± 1.5 EV	1.3EV	
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FM ACCURACY	AB voltage characteristics	Exposure difference is within 0.3EV when measured with regular voltage (7.0V) and minimum operating voltage at LV12 with ISO 100 film speed setting.			Digital multimeter																																											
	Shutter operation in bright condition	Shutter should open at LV12 with ISO 1600 film speed setting.																																														
FM ACCURACY	Exposure limit for flash photography	Fire flash in darkness and measure exposure time. $T_t = 22.2 \pm 6\text{ms}$ Slow sync = $250\text{ms} \pm 50\text{ms}$ Shutter should open fully.																																														
																																																

ITEM		STANDARD				TOOLS		
PM ACCURACY	Adjustment of tester	Settings: ISO 100, K=1.3, LV9 Set lens to Wide position, open shutter sector and then set camera to tester. Under above condition, set tester's switch to "CAL" and adjust tester with variable resister so that indication will be +0.7EV.				AB tester		
AF ACCURACY	AF step location and switching position	Amount G1 lens move out		Amount G1 lens move out				
		Step	Distance set	Switching point	Step	Distance set	Switching point	
			Distance			Distance		
		1	41.3442 m	0.0201mm	Step 01 ∞	15	1.2594	0.7130
		2	12.0029	0.0696	8.0000m	16	1.1842	0.7625
		3	7.0577	0.1190	5.8165	17	1.1181	0.8120
		4	5.0085	0.1686	4.3606	18	1.0597	0.8615
		5	3.8948	0.2180	3.4955	19	1.0076	0.9110
		6	3.1917	0.2675	2.9223	20	0.9608	0.9605
		7	2.7083	0.3170	2.5146	21	0.9608	1.0100
		8	2.3557	0.3665	2.2099	22	0.8805	1.0595
		9	2.0871	0.4160	1.9735	23	0.8457	1.1090
		10	1.8757	0.4655	1.7848	24	0.8139	1.1584
		11	1.7050	0.5150	1.6306	25	0.7847	1.2079
		12	1.5642	0.5645	1.5024	26	0.7578	1.2574
		13	1.4462	0.6140	1.3940	27	0.7328	1.3070
		14	1.3458	0.6635	1.3011	28	0.7099	1.3564
	Distance-too-close warning	<ul style="list-style-type: none"> Green LED blinks to warn. Normal 0.620.65mm Flash cancel 0.67~0.70m 				Standard reflector paper		
	Distance-too-far warning	<ul style="list-style-type: none"> Green LED blinks to warn. ISO 64-200 Step ③ & ④ swiching point :beyoned ± 0.5 ISO 400-3200 Step ② & ③ swiching point :beyoned ± 0.5 						

	ITEM	STANDARD			TOOLS															
LENS BARREL	Time and current when lens barrel switches over	Position	Operating time	Current	Oscilloscope															
		R e \Rightarrow W	Within 0.3 sec	Within 700mA																
		W \Rightarrow T	Within 1.5 sec																	
	Timer driving	T \Rightarrow R e	Within 1.8 sec																	
		<ul style="list-style-type: none"> • 180 sec. \pm 2 sec. • Lens barrel should return to the position Z22. • LCD should go out when time is up. 																		
		<ul style="list-style-type: none"> • LCD indicator blinks at 2Hz and lens barrel stops at this position. • After LCD blinks for 3 min, it lights off. 																		
BACK FOCUS	Back focus	Set adjustment focus stand on film guide rail and set lens to step 1. Wide setting: $100 \pm 70 \mu\text{m}$ Tele setting: $100 \pm 210 \mu\text{m}$			Collimator (J19019) Adjustment focus stand (J15291)															
	Difference between T and W	Value for T is within $\pm 100 \mu\text{m}$ compared with that for W.																		
OPERATIONAL SWITCHES, BUTTONS, BTC.	Main switch	<table border="1"> <thead> <tr> <th></th> <th>Stroke</th> <th>Tension</th> </tr> </thead> <tbody> <tr> <td>ON position</td> <td>$2.2 \pm 0.3\text{mm}$</td> <td>$125\text{g} \pm 20\text{g}$</td> </tr> <tr> <td>Whole stroke</td> <td>(2.5mm)</td> <td>$200\text{g} \pm 80\text{g}$</td> </tr> </tbody> </table>				Stroke	Tension	ON position	$2.2 \pm 0.3\text{mm}$	$125\text{g} \pm 20\text{g}$	Whole stroke	(2.5mm)	$200\text{g} \pm 80\text{g}$	Dial gauge Tension gauge						
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C) Difference between A) & B)		$0.3 \pm 0.1\text{mm}$	—																	
Zoom lever	Measure tension and stroke at the position 7mm apart from the center of turning. Tension to turn on: $250 \pm 100\text{g}$ Stroke to turn on: $0.6 \pm 0.3\text{mm}$																			
Function button	Tension to turn on: $100 \pm 50\text{g}$ Stroke to turn on: $0.6 \pm 0.3\text{mm}$																			

	ITEM	STANDARD		TOOLS								
OPBRA-TIONAL SWITCHS, BUTTONS, ETC.	Mid-roll rewind button	Tension to turn on: 35 ± 10 g Stroke to turn on: 0.5 ± 0.1 mm (Height from edge of hole)		Dial gauge								
	Camera back open lever	Stroke to open = 1.3 ± 0.3 mm Whole stroke = 2.0mm (for reference) Tension to open: 350 ± 50 g Tension to close: 1000 ± 500 g										
CONTACTS, SPRINGS, PRESSURE PLATE, FILM ARMS, ETC.	Battery chamber	Tension of contact: 300g or more (at 3.5mm from ceiling of battery chamber)		Dial gauge								
	Film cartridge spring	Tension: 280 ± 50 g (when held by 1.3mm from body)		Tension gauge								
	DX contacts	Tension: 43 ± 5 g Height: 1.4 ± 0.15 mm Measure tension when depressing contacts until there height is 1.0mm.										
	Pressure plate	Height = 3.0 ± 0.2 mm (From inside surface of camera back) Flatness: 0.05mm or less Tension of spring: 350~500g (When depressed by 0.05mm)										
	Film arm 1	Tension 50 ± 15 g (When depressed by 0.4mm)										
	Film arm 2	Tension 40 ± 15 g (When starting to move)										
MOTOR	Film advance	<table border="1"> <thead> <tr> <th></th> <th>Operating time</th> <th>Current</th> </tr> </thead> <tbody> <tr> <td>With film</td> <td>Within 0.8 sec</td> <td>600mA or less</td> </tr> </tbody> </table>			Operating time	Current	With film	Within 0.8 sec	600mA or less	Film Oscilloscope		
	Operating time	Current										
With film	Within 0.8 sec	600mA or less										
Film rewind	<table border="1"> <thead> <tr> <th></th> <th>Operating time</th> <th>Current</th> </tr> </thead> <tbody> <tr> <td>Film end detection</td> <td>2.4 ± 0.5 sec</td> <td>900mA or less</td> </tr> <tr> <td>Film rewind</td> <td>Within 30 sec</td> <td>400mA or less</td> </tr> </tbody> </table>			Operating time	Current	Film end detection	2.4 ± 0.5 sec	900mA or less	Film rewind	Within 30 sec	400mA or less	
	Operating time	Current										
Film end detection	2.4 ± 0.5 sec	900mA or less										
Film rewind	Within 30 sec	400mA or less										

	ITEM	STANDARD	TOOLS														
FLASH	Flash level	Wide: EV 10.375 $\pm 1.0\text{BV}$ Tele: EV 13.000 $\pm 1.0\text{BV}$ ((ISO 100))	Brightness box Brightness meter														
	Guide number	Wide: $15 \pm 0.4\text{BV}$ Tele: $16.8 \pm 0.4\text{EV}$ (ISO 100 distance 2m) PTS Wide: 0.8 or over Tele: 1.1 or over	Flash meter Tape measure Standard reflector paper														
	Recycling time	3.5 sec or shorter															
	Light distribution feature	Measure light at following points. Difference from center should be within 1.0BV. <table border="1"><tr><td></td><td>Top</td><td>Bottom</td><td>Right</td><td>left</td></tr><tr><td>Wide</td><td>20°</td><td>23°</td><td>28°</td><td>33°</td></tr><tr><td>Tele</td><td>7°</td><td>11°</td><td>10°</td><td>17°</td></tr></table> Remarkable unevenness is not to be found.		Top	Bottom	Right	left	Wide	20°	23°	28°	33°	Tele	7°	11°	10°	17°
	Top	Bottom	Right	left													
Wide	20°	23°	28°	33°													
Tele	7°	11°	10°	17°													
Color temperature	$5.500 \pm 300^\circ \text{K}$																
VIEW-FINDER	Diopter	- side $= -1.0 \pm 0.5 \text{ dpt}$ + side $= +0.5 \pm 0.5 \text{ dpt}$	Diopter telescope														
	Viewfinder coverage	Wide: $83 \pm 4\%$ Vertically/Horizontally Tele: $87.3 \pm 4\%$ Vertically $84.9 \pm 4\%$ Horizontally Panorama Ensured more than 80%. Measure at distance 3m	Viewfield chart														
	Parallax	Normal The angle of finder is within the angle of aperture. Panorama Vertically: $\pm 1.3\text{mm}$ or less Horizontally: Same Fullsize.	Film scale														
	Magnification	Wide: $0.43 \pm 0.05 \times$ Tele: $1.01 \pm 0.05 \times$															

	ITEM	STANDARD	TOOLS
OTHERS	Self-timer	(Time in sec) ± 1 sec	Stop watch
	Battery check voltage	4.2V (min.) LCD light up. 4.2 to 3.9V LCD blinks. (2Hz) 3.9V or lower LCD gone out. Shutter release lock	DC regulated power supply Digital multi-meter
	Standby current	10 μ A or less when main SW is off.	
	Pre-release current	30mA or less	
	Clearance on external surface	0.2mm or less	

[2] TOOLS

1. Special tool

Tool No.	Name	Illustration	Class	Remarks
J18233A	TW Zoom 85 inspection & adjustment program			
J18233B			A	
J18233C				
J18233D				
J15305	TW Zoom 85 Communicatio tool (self-made)	See to other sheets		

2. Major general tools and testers

Tool No.	Name	Specifications
----	Slide calipers	
J5134	Torque driver	
J9001-5	DC regulated power supply	0-18V, 2A (MODEL 526)
J9006-6	Digital multimeter	Model 3200
J15291	Tool for adjusting focus stand	
J19019	Collimator	24LT-2DTS, f=193.5mm
J19036	Multi shutter tester	BF-511N
J18190	Standard reflector paper	OXFORD GRAY No. 22

TOOL (J15305)

1. Name: Communication Tool for TW Zoom 85 (Modification is required.)
2. To be used for: Check and Adjustment on camera function
3. Preparation:

As it cannot be used without modification, please modify it by yourself.

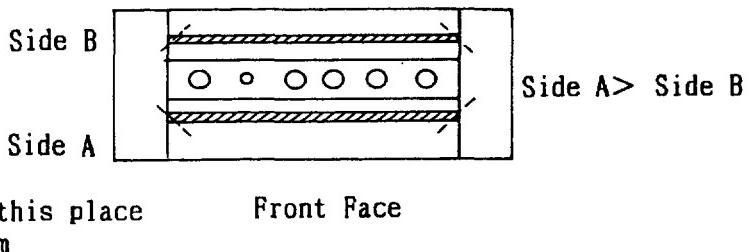
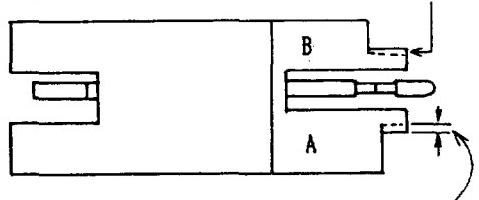
The wires described below will be required for modification.

- * Outer diameter; Approx. 1mm
- * Length; Approx. 1.5m
- * Quantity; Five pieces (in different colors)

4. How to assemble:

- 1) Process on Connector for Data Back contacts (Matching a pair of parts)

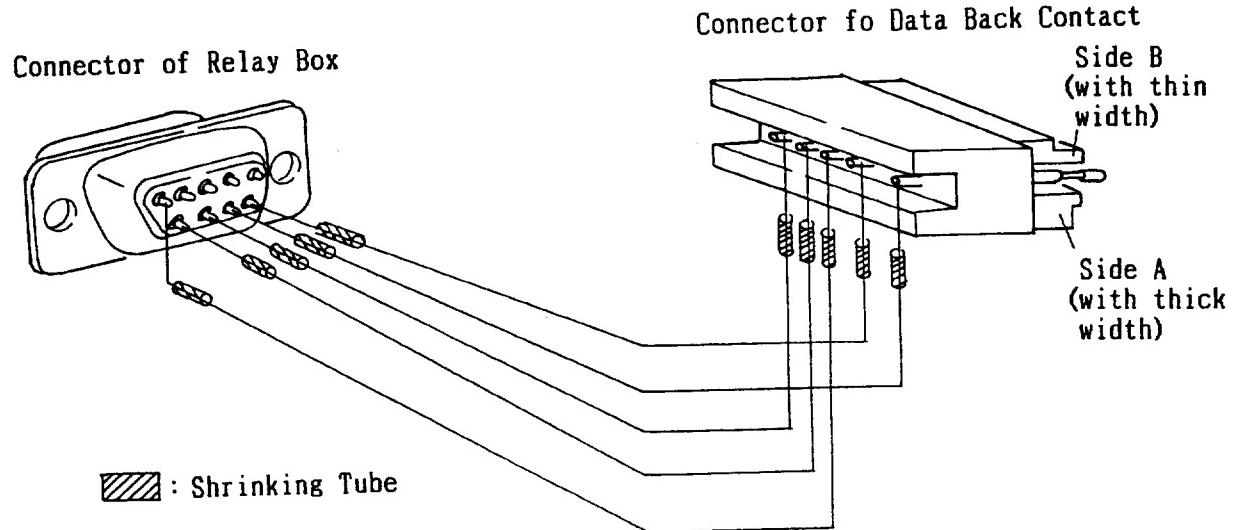
Plane down this place slopingly



- * See the sketch of Side Face. Plane away an under side of projected part about 0.2~0.3 mm.
- * See the sketch of Front Face. Plane away the corners at four points. A slightly larger volume is to be planed on A side.
- * Matching a pair of parts, plane away the upper side of projected part with some slope.
- * Tight matching is recommended.

2) Soldering the wires

- * Bundle five pieces of wires (by a band or similar article).
- * Cover the each wire with heat shrinking tube, and then solder them to each connecting tip.



5. Cautions

- 1) When processing the Connector for Data Back Contact, please treat it carefully so as not to plane away the parts too much.
- 2) Please do not cause short circuit between the terminals by soldering.
- 3) The colors are not unified for wiring.

TWZ85 (Zoom Touch 600) EEPROM表

1993-03-16版

アドレス	内 容	固 定 値
0	未 使用	
1	A F 調整値	65109
2		9748
3		55399
4		5998
5		
?		
16		
17	A E 調整値	
?		
24		
25	シャッター調整値	
?		
43		
44	カメラ制御用データ	
?		
48	レリーズ回数	
49	フィルムデータ（前回）	
50	フィルムデータ（前々回）	
51	カメラ制御用データ	
52	カメラ制御用データ	
53	未 使用 領 域	
?		
59		
60	カメラ制御用データ	
?		
63		

各々のアドレスは、2バイト(16ビット)の値が記憶されている。
 1つのアドレス内には各データがビット単位で、値が記憶されているので
 むやみにデータの書き換えを行うと精度不良、作動異常の原因になります。

TW Zoom 85 (Zoom Touch600) EEPROM DATA

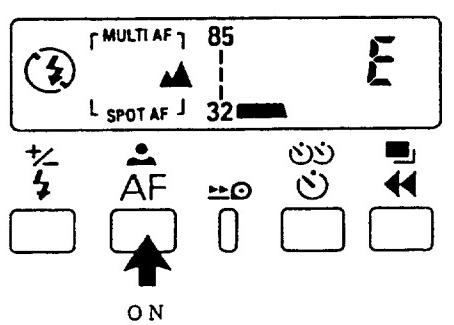
VER. 1993-03-16

ADDRESS	CONTENTS	FIXED
0	NOT IN USE	
1		6 5 1 0 9
2		9 7 4 8
3		5 5 3 9 9
4	AF ADJUSTMENT DATA	5 9 9 8
5		
?		
1 6		
1 7		
?	AE ADJUSTMENT DATA	
2 4		
2 5		
?	SHUTTER DATA	
4 3		
4 4		
?	CAMERA CONTROL DATA	
4 8	SHUTTER RELEASING TIMES	
4 9	FILM DATA (PREVIOUS)	
5 0	FILM DATA (BEFORE LAST)	
5 1	CAMERA CONTROL DATA	
5 2	CAMERA CONTROL DATA	
5 3		
?	NOT IN USE	
5 9		
6 0		
?	CAMERA CONTROL DATA	
6 3		

- Two bytes(16 bits) data are memorized in each address.
- Each data is memorized in each address bit by bit.
If you rewrite the data thoughtlessly, camera will be either inaccurate or malfunction.

Manual inspection mode**1. Manual inspection mode input procedure:**

- 1) Turn the power ON. The lens barrel stops at other than RESET position and LCD is lit.
- 2) Turn AF button ON, then immediately afterward, turn ZUS (zoom-up switch) and S1 (pre-release switch) ON. Keep these three switches ON for ten seconds.
- 3) During the initial manual inspection mode, [MULTI AF] indicator, [SPOTAF] indicator on frame go out; frame counter is "0".



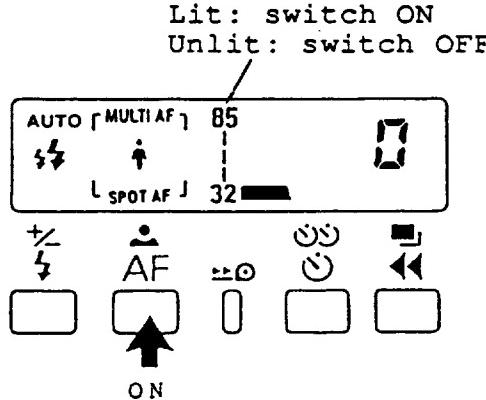
Turn the pre-release switch (S1) ON.



Turn zUS ("T" side of zoom switch) ON.

2. Command selection and switch/data setting

- 1) In manual inspection mode, turn AF ON again for three seconds.
- 2) Turn ZSW to either the "W" or "T" side while keeping AF ON. Then, a number corresponding to each command is indicated on the frame counter. This number shows the command currently selected.
The current switch setting is indicated by the scale of the lens barrel zone indicator being lit, or, unlit. When the command to execute is selected, turn ZSW OFF while keeping AF ON.



Lit: switch ON
Unlit: switch OFF

When the pre-release switch is turned ON, the scale lights up; when turned off, it goes out.



"W" side to count down.
"T" side to count up.

- ③ When the READ mode is selected in each of the AF step, the ISO value, the AE value and the EV value, turning on the S1 will show each corresponding resulted value on the film counter display.
- * By repeating these steps while keeping the ISS turned on, several commands can be set simultaneously.

3. Cancellation of the manual inspection mode

The manual inspection mode can be cancelled when:

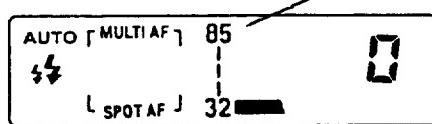
- ① the lens barrel has been returned to its RESET position after the main switch (MSW) is switched off.
- ② the 3-minute timer has ended up.

Inspection command table:

NO	Command	Switch	Indication	Contents
0	Bulb permission	OFF	NO	Prohibits bulb mode.
		ON		Permits bulb mode.
1	Bulb	OFF	NO	Normal shutter release.
		ON		Bulb exposure is carried out when S2 is turned ON if bulb permission is selected.
2	Read of AE value	OFF	C. EV	C. EV and R. EV values are indicated by the AE process when S1 is turned ON.
		ON	R. EV	
3	AF step value	OFF	Step (1~30)	Indicates AF step value just before shutter release.
		ON		Indicates AF step value just before shutter release or setting step value set manually.
4	ISO value	OFF	DIN (19 ~36)	Reads out and indicates the present ISO value.
		ON		Reads out and indicates the present ISO value or value set manually.
5	Step zoom	OFF	Zone (1~22)	Reads out and indicates the present lens barrel zone value.
		ON		Drives the lens barrel at every zone. indicates zone value when completed.
6	READ of AF AE value	OFF	AF/AE value alternately	Prohibits indicated.
		ON		Indicates AF value and AE value alternately every 0.5 second when pre-release switch S1 ON.

Lit: switch on

Unlit: switch OFF



Operation sexecuted by each command in manual inspection mode:

(1) Shutter bulb (command No.0,1):

- a. Setting command No.0 and No.1 switch is ON.
- b. When S2 is turned ON,bulb exposure is carried out.
To close the shutter,turn S2 ON again.

(2) AE value readout (command No.2):

- a. When either S1 or S2 is turned ON while aiming the unit toward subject, results of the AE process (CEV, REV) are stored in RAM.
CEV and REV are alculated by adding ISO value and exposure compensation value to the results of the metering.
- b. AE value is indicated in CEV and REV. (Refer to Table 1.)

(3) AF step readout (command No.3):

- a. When either S1 or S2 is turned ON while aiming the unit toward subject, results of the AE process (AF step) are stored in RAM.
- b. Af step value is indicated. (Refer to Table 3.)

(4) AF step manual set (comand No.3):

- a. The step value can be set arbitrarily by operating S1 and zoom SW.
(command N0.3 set is ON)

(5) DIN value readout (command No.4):

- a. The step value can be set arbitrarily by operating S1 and zoom SW.
(command NO.4 set is OFF) (Refer to Table 2.)

(6) Seting of DIN value (command No.4):

- a. When used with exposure compensation, DIN value is limited to ISO 64 ~ ISO 3200. (command NO.4 set is ON)
- b. The DIN value can be set arbitrarily by operating S1 and zoom SW.

(7) Lens barrel zone readout and step zooming (commad No.5):

- a. When zoom SW is turned ON, the lens barrel is driven outward/inward by one zone and steps. Then the present zone value is indicated.
(command NO.5 set is OFF) (Refer to Table 4.)

(8) Read of EV value and AF value (command No.6)

- a. Indicates AF value and AF value alternately 0.5 second when pre-release switch S1 ON.

REV, CEV, EV

Date	Disp.	Date	Disp.	Date	Disp.	Date	Disp.
6	60	9 3/8	93	12 6/8	2.6	16 1/8	6.1
6 1/8	61	9 4/8	94	12 7/8	2.7	16 2/8	6.2
6 2/8	62	9 5/8	95	13	3.0	16 3/8	6.3
6 3/8	63	9 6/8	96	13 1/8	3.1	16 4/8	6.4
6 4/8	64	9 7/8	97	13 2/8	3.2	16 5/8	6.5
6 5/8	65	10	.0	13 3/8	3.3	16 6/8	6.6
6 6/8	66	10 1/8	.1	13 4/8	3.4	16 7/8	6.7
6 7/8	67	10 2/8	.2	13 5/8	3.5	17	7.0
7	70	10 3/8	.3	13 6/8	3.6		
7 1/8	71	10 4/8	.4	13 7/8	3.7		
7 2/8	72	10 5/8	.5	14	4.0		
7 3/8	73	10 6/8	.6	14 1/8	4.1		
7 4/8	74	10 7/8	.7	14 2/8	4.2		
7 5/8	75	11	1.0	14 3/8	4.3		
7 6/8	76	11 1/8	1.1	14 4/8	4.4		
7 7/8	77	11 2/8	1.2	14 5/8	4.5		
8	80	11 3/8	1.3	14 6/8	4.6		
8 1/8	81	11 4/8	1.4	14 7/8	4.7		
8 2/8	82	11 5/8	1.5	15	5.0	DIN Value	
8 3/8	83	11 6/8	1.6	15 1/8	5.1	DIN	ISO
8 4/8	84	11 7/8	1.7	15 2/8	5.2	19	64
8 5/8	85	12	2.0	15 3/8	5.3	21	100
8 6/8	86	12 1/8	2.1	15 4/8	5.4	24	200
9 7/8	87	12 2/8	2.2	15 5/8	5.5	27	400
9	90	12 3/8	2.3	15 6/8	5.6	31	1000
9 1/8	91	12 4/8	2.4	15 7/8	5.7	33	1600
9 2/8	92	12 5/8	2.5	16	6.0	36	3200

Indication metering range

W (Zone 22) : EV 6 ~ 14.75

T (Zone 1) : EV 7 ~ 17

Each Step
and distance

Step	Distance set (m)	Switching distance (m)
1	41.3442	
2	12.0029	8.0000
3	7.0577	5.8165
4	5.0085	4.3606
5	3.8948	3.4955
6	3.1917	2.9223
7	2.7083	2.5146
8	2.3557	2.2099
9	2.0871	1.9735
10	1.8757	1.7848
11	1.7050	1.6306
12	1.5642	1.5024
13	1.4462	1.3940
14	1.3458	1.3011
15	1.2594	1.2207
16	1.1842	1.1505
17	1.1181	1.0885
18	1.0597	1.0334
19	1.0076	0.9841
20	0.9608	0.9398
21	0.9187	0.8997
22	0.8805	0.8633
23	0.8457	0.8300
24	0.8139	0.7995
25	0.7847	0.7715
26	0.7578	0.7457
27	0.7328	0.7218
28	0.7099	0.6996

Zoom zone control

Zone	Focal length	Groups
Z01	81.6 ~ 84.2	⑤
Z02	78.5 ~ 81.4	
Z03	74.7 ~ 78.2	
Z04	71.7 ~ 74.5	④
Z05	68.7 ~ 71.5	
Z06	65.7 ~ 68.5	
Z07	63.1 ~ 65.4	
Z08	60.6 ~ 62.8	
Z09	57.9 ~ 60.2	③
Z10	55.5 ~ 57.6	
Z11	53.1 ~ 55.2	
Z12	50.9 ~ 52.8	
Z13	48.9 ~ 50.5	
Z14	47.0 ~ 48.6	②
Z15	44.9 ~ 46.6	
Z16	43.1 ~ 44.6	
Z17	41.3 ~ 42.8	
Z18	39.4 ~ 40.9	
Z19	37.3 ~ 39.0	①
Z20	35.5 ~ 37.0	
Z21	34.0 ~ 35.2	
Z22	33.0 ~ 33.8	
Z23	Reset	

LCD DISPLAY

①	②	③	④	⑤
85	85	85	85	85 -
-	-	-	-	-
32 -	32 -	32 -	32 -	32 -

展開図・部品表編

記号説明	K 1
テープ類TA設定部品一覧表	K 3
リードワイヤー一覧表	K 4
収縮チューブ一覧表	K 5
展開図の見方	K 6

[1] 展開図

本体部・W/Rモーター部・DX接点部	F 1
巻上げ、巻戻しギア部	F 2
本体部・SB基板部・パノラマ部・フリースプロ部	F 3
外ヘリコイド部・直進筒・シャッター部	F 4
鏡筒モーター部・固定環	F 5
ファインダー部Ⅰ	F 6
A Fホルダー部・LCD	F 7
ファインダー部Ⅱ	F 8
前カバー部・バリアー部	F 9
後カバー・裏蓋部	F 10

[2] 部品表

部品表	P 1
部組品表	P 15

Exploded Drawings & Parts List

MARKS IN THE PARTS LIST	K 1
TAPES AND FILMS WITH PREFIX ALPHABETS TA	K 3
LEAD WIRE LIST	K 4
THERMAL CONSTRUCTION TUBE LIST	K 5
HOW TO USE EXPLOSION DRAWINGS	K 6

[1] Exploded Drawings

MAIN FRAME, W/R MOTOR UNIT, DX CONTACT UNIT	F 1
WINDING & REWINDING GEARS	F 2
MAIN FRAME, FLASH UNIT, PANORAMA UNIT, FREE SPROCKET	F 3
OUTER HELICOID, GUIDE TUBE UNIT, SHUTTER UNIT	F 4
MOTOR UNIT, RETAINING RING	F 5
FINDER UNIT I	F 6
AP HOLDER UNIT, LCD	F 7
FINDER UNIT II	F 8
FRONT COVER, LENS COVER	F 9
REAR COVER, BACK DOOR	F 10

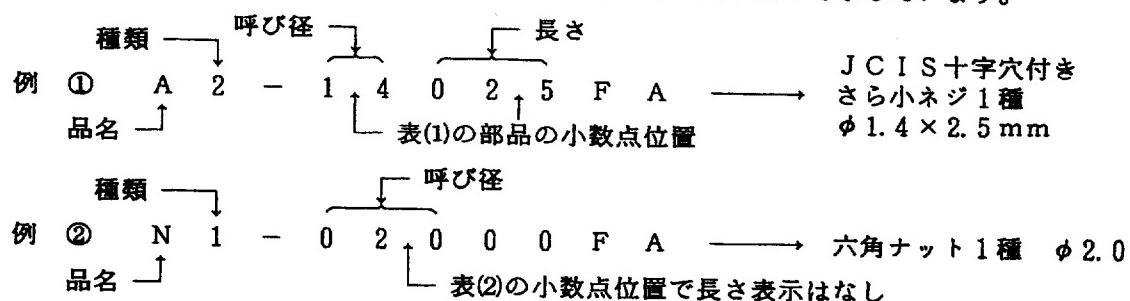
[2] Parts List

PARTS LIST	P 1
ASSEMBLY LIST	P 15

記号説明 MARKS IN THE PARTS LIST

(1) 機械標準品

下の表に示す機械標準品の部品番号は品名、種類、呼び径、長さを示しています。



(1) Standard mechanical parts Reference Number in the Parts List

A. Screw · Pin

A 2 - 1 4 0 2 5 F A
 ↑ Item ↑ Type Diameter Length

B. Nut · Washer · Snap ring

N 1 - 0 2 0 0 0 F A
 ↑ Item ↑ Type Diameter

表 1

品名 Item	種類 Type	品名 Item	種類 Type
JCIS 十字穴付き小ねじ 1種 Cross-point screw 1	A	なべ Pan	丸先 Round point
		さら Countersunk	とがり先 Cone point
		丸さら Oval	くぼみ先 Half point
JCIS 十字穴付き小ねじ 3種 Cross-point screw 3	B	なべ Pan	とがり先 Cone point
		さら Countersunk	くぼみ先 Half point
		丸さら Oval	平先 Normal
十字穴付き小ねじ Cross-point screw	C	なべ Pan	六角穴付きボルト Hexagon socket head bolt
		さら Countersunk	平行ピン Straight pin
		丸さら Oval	テーパーピン Taper pin
		トラス Trus	スプリングピン Spring cotter
十字穴付きタップタイプ タイトねじB型 Cross-point tapped screw B	F	なべ Pan	一般用 Normal
		さら Countersunk	軽荷重用 Light
JCIS 十字穴付きタップタイプ タイトねじB型 1種 Cross-point tapped screw B1	G	なべ Pan	六角ナット Hexagon nut
		さら Countersunk	平座金 Washer
		丸さら Oval	ばね座金 Spring washer
JCIS 十字穴付きタップタイプ タイトねじB型 3種 Cross-point tapped screw B3	H	なべ Pan	E型 止め環 B-snap ring
		さら Countersunk	G型 止め環 E-snap ring
		丸さら Oval	GS型 止め環 F-snap ring

(2) 販売区分欄 The term of sale colum

記号 Mark	説明 Explanation
○	Can be Supplied individually : 単独部品として販売するもの
△	Not supplied individually but only as subassembly. : 部組品でなければ販売しないもの
○△	Supplied either as part or subassembly : 単独部品でも部組品でも販売するもの
×	Not considered as repair part : 修理部品と考えないもの
*	Should be sent to the factory if the repair needed. : 単体では交換できないので、組む場合に工場での加工が必要なもの
□	Delivered as a product from the sales department (i.e., not supplied as repair part) : 商品として販売店で販売しているもの (修理部品扱いはしない)

(3) 備考欄 The remarks colum

F-601M (Blue × 125mm)	Part number used in common	共通部品番号
	Lead wire (color × length)	コードの色と長さ
53F-2013 (PM-780028)	Technical information ref. number (number in parenthesis; English edition)	製品技術資料No. ()内は英文
(2.1×3.8 × 0.07)	Washer (internal diameter × external diameter × thickness)	ワッシャー (内径×外径×厚さ)
(Black) (d=0.2)	Black-finished parts	黒部品
(t= 1)	Diameter of wire	線型=0.2
Rev.	Thickness	厚さ=1
Add.	Revision	訂正
Dis.	Addition	追加
OLD	Discontinuation	廃止
◆	Parts of the intial design	旧部品
RP-9001	Limited part	R P 限定出庫部品
R1... D1... W1... C1... Q1... P1...	Repair part information No.	R P 情報No.
TA-0003	Abbreviation for electronic part	電気部品記号
	Number (TA-*****) are order numbers of adhesive tape. (For the order of adhesive tape, the number 1K***-*** is not use).	接着テープ要求部番 (1K***-*** では部品要求できません。)
W-0056BE	Number (W-0056BE) are order numbers of Lead wire. (For the order of Lead wire, the number 1K***-*** is not use).	リードワイヤ要求部番 (1S***-*** では部品要求できません。)

* VERSATILE PART

* 既出部品

Apart maked with this pentagonal symblo is used commonly in the arcitecture of other products. That is called "VERSATILE PART". Note that every part, bearing new part number of eleven places, will turn into a VERSATILE PART when it is used in the design of future product.

テープ類TA設定部品一覧表

TAPES AND FILMS WITH PREFIX ALPHABETS TA Dec. 17, 1991

部品 No. Part No.	名称 Name of part	色 Color	厚さ Thickness (t=mm)	幅 Widths (mm)	長さ Length (m)	要求単位 Q'ty for a unit for ordering
TA-0001	ポリエスチルフィルム Tape	透明 Transparent	0.025	10	30	1巻 1 roll
TA-0002	ポリエスチルフィルム Tape	透明 Transparent	0.025	20	30	1巻 1 roll
TA-0003	両面接着テープ Both sided adhesive tape	白 White	0.16	10	2	1巻 1 roll
TA-0004	両面接着テープ Both sided adhesive tape	黒 Black	0.14	12	50	1巻 1 roll
TA-0005	ポリエスチルフィルム Tape	黄 Yellow	0.06	19	66	1巻 1 roll
TA-0006S	アセテートクロス(シート) Tape (200x120/sheet)	黒 Black	0.23	6	200 (mm)	1set (20pcs)
TA-0007	銅箔導電性 Tape, copper foil	銅箔 Copper foil	0.11	4	6	1巻 1 roll
TA-0008	ポリエスチルフィルム Tape	透明 Transparent	0.055	30	30	1巻 1 roll
TA-0009	カブトンフィルム Tape	琥珀 Amber	0.07	6	30	1巻 1 roll
TA-0010	両面接着テープ Both sided adhesive tape	乳白色 Opal	0.16	15	36	1巻 1 roll
TA-0011	ポリエスチルフィルム Tape	黒 Black	0.06	10	30	1巻 1 roll
TA-0012	ポリエスチルフィルム Tape	透明 Transparent	0.025	6	30	1巻 1 roll
TA-0013	アセテートクロス(シート) Tape (200x120/sheet)	黒 Black	0.23	20	200 (mm)	1set (20pcs)

リードワイヤー一覧表

LEAD WIRE LIST

DEC. 17, 1991

部品 No. Part No.	色 Color	外形 Diameter (outer tube)	導体サイズ Pcs. Diameter (lead wire)	部品 No. Part No.	色 Color	外形 Diameter (outer tube)	導体サイズ Pcs. Diameter (lead wire)
W-0045BN	Brown	0.45mm	7×0.05mm	W-0108BK	Black	1.08mm	7×0.16mm
W-0045RE	Red	-ditto-	-ditto-	W-0108BN	Brown	-ditto-	-ditto-
W-0045OR	Orange	-ditto-	-ditto-	W-0108RE	Red	-ditto-	-ditto-
W-0045GN	Green	-ditto-	-ditto-	W-0108OR	Orange	-ditto-	-ditto-
W-0045BE	Blue	-ditto-	-ditto-	W-0108YE	Yellow	-ditto-	-ditto-
W-0045PU	Purple	-ditto-	-ditto-	W-0108GN	Green	-ditto-	-ditto-
				W-0108BE	Blue	-ditto-	-ditto-
W-0056BK	Black	0.56mm	7×0.08mm	W-0108PU	Purple	-ditto-	-ditto-
W-0056BN	Brown	-ditto-	-ditto-	W-0108GY	Gray	-ditto-	-ditto-
W-0056RE	Red	-ditto-	-ditto-	W-0108WH	White	-ditto-	-ditto-
W-0056OR	Orange	-ditto-	-ditto-				
W-0056YE	Yellow	-ditto-	-ditto-	W-0120BK	Black	1.2 mm	7×0.18mm
W-0056GN	Green	-ditto-	-ditto-	W-0120BN	Brown	-ditto-	-ditto-
W-0056BE	Blue	-ditto-	-ditto-	W-0120RE	Red	-ditto-	-ditto-
W-0056PU	Purple	-ditto-	-ditto-	W-0120OR	Orange	-ditto-	-ditto-
W-0056GY	Gray	-ditto-	-ditto-	W-0120YE	Yellow	-ditto-	-ditto-
W-0056WH	White	-ditto-	-ditto-	W-0120GN	Green	-ditto-	-ditto-
W-0056PK	Pink	-ditto-	-ditto-	W-0120BE	Blue	-ditto-	-ditto-
				W-0120PU	Purple	-ditto-	-ditto-
				W-0120GY	Gray	-ditto-	-ditto-
				W-0120WH	White	-ditto-	-ditto-
W-0080BK	Black	0.80mm	7×0.12mm				
W-0080BN	Brown	-ditto-	-ditto-	W-0150BK	Black	1.5 mm	40×0.08mm
W-0080RE	Red	-ditto-	-ditto-	W-0150BN	Brown	-ditto-	-ditto-
W-0080OR	Orange	-ditto-	-ditto-	W-0150RE	Red	-ditto-	-ditto-
W-0080YE	Yellow	-ditto-	-ditto-	W-0150OR	Orange	-ditto-	-ditto-
W-0080GN	Green	-ditto-	-ditto-	W-0150YE	Yellow	-ditto-	-ditto-
W-0080BE	Blue	-ditto-	-ditto-	W-0150GN	Green	-ditto-	-ditto-
W-0080PU	Purple	-ditto-	-ditto-	W-0150BE	Blue	-ditto-	-ditto-
W-0080GY	Gray	-ditto-	-ditto-	W-0150PU	Purple	-ditto-	-ditto-
W-0080WH	White	-ditto-	-ditto-	W-0150GY	Gray	-ditto-	-ditto-
W-0080LB	Light blue	-ditto-	-ditto-	W-0150WH	White	-ditto-	-ditto-
1 roll = 20m							

収縮チューブ一覧表

Thermal construction tube list

Dec. 17, 1991

展開図の見方 How to use explosion drawings

部組品 No.
Assembly No. (component parts shown inside the broken line)

部品要求単位
Quantity per order

(1)	1B990-655
(50)	G2-17035FA
(50)	G1-17035FA
(10)	1K010-061
(5)	1B990-488
(10)	1K120-334x2

部品番号
Part No.

項目 Part Classification	販売区分 Term of Supply	記号 Mark
破線外で部番の入っているもの Part with Part No., shown outside the broken line	単部品で要求できるもの Available as individual part	○
破線外で部番のないもの Part without Part No., shown outside the broken line	修理部品と考えないもの Not available as repair part	×
破線内で部番のないもの Part without Part No., shown inside the broken line.	部組品でなければで要求できないもの Available only as assembly.	△
破線内で部番の入っているもの Part with Part No., shown inside the broken line	単部品でも部組品でも要求できるもの Available as assembly or individually	○△

MAIN FRAME, W/R MOTOR UNIT, DX CONTACT UNIT

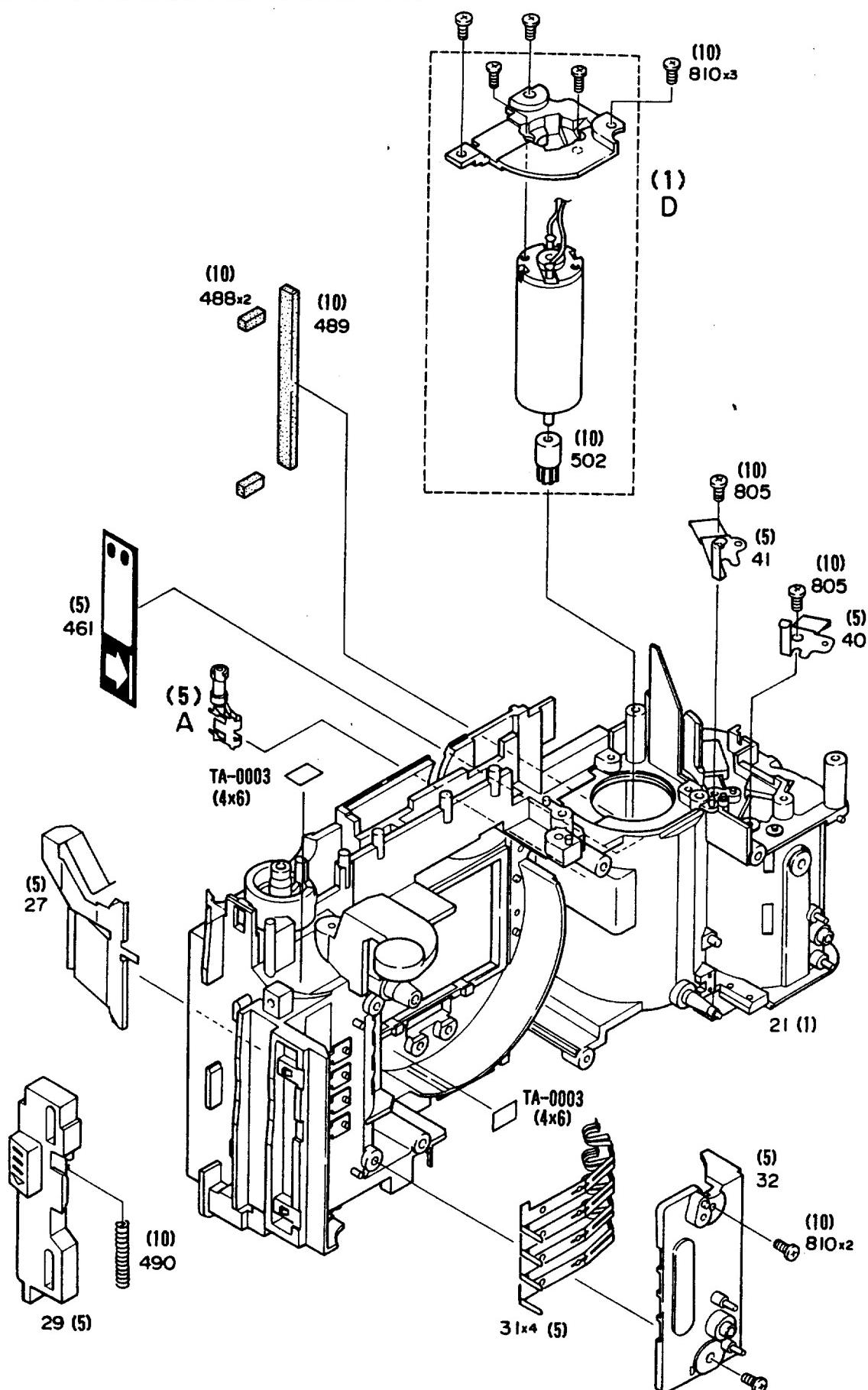


Fig. 1

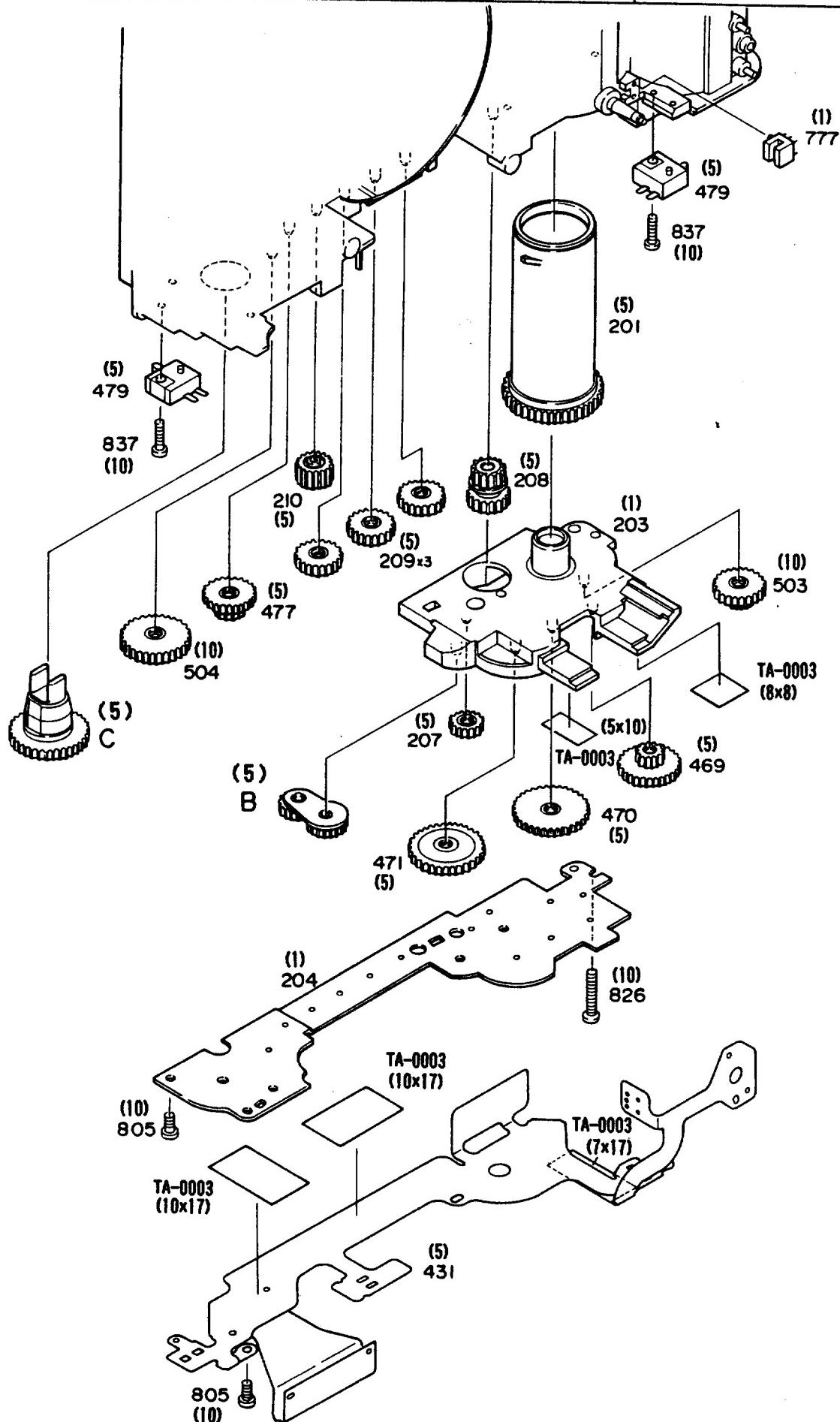


Fig. 2

MAIN FRAME, FLASH UNIT, PANORAMA UNIT, FREE SPROCKET

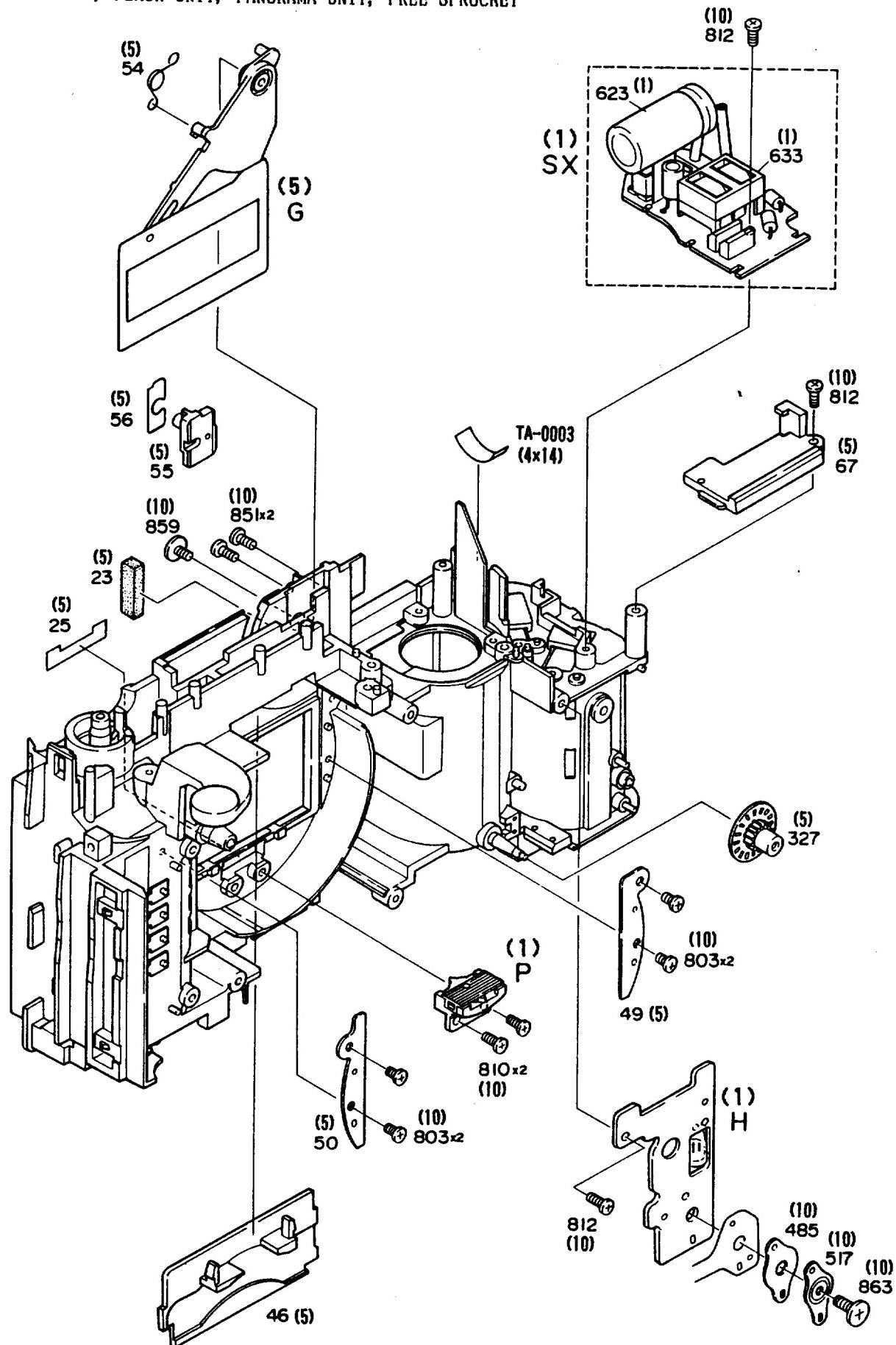


Fig. 3

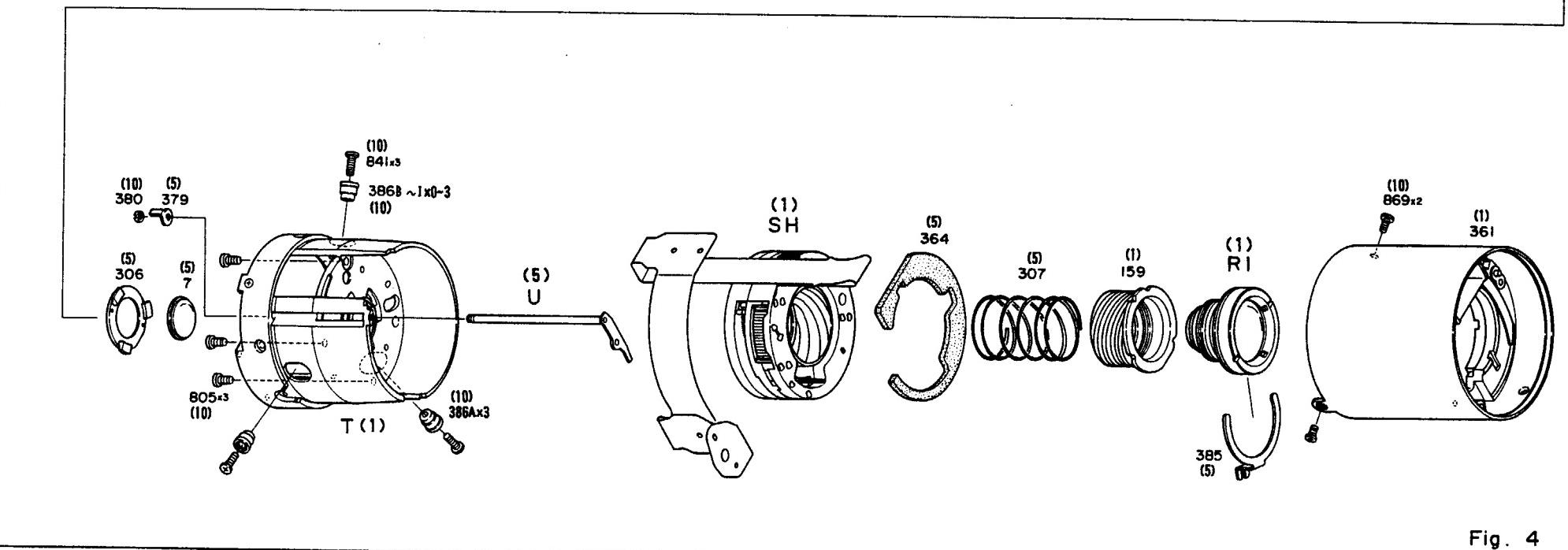
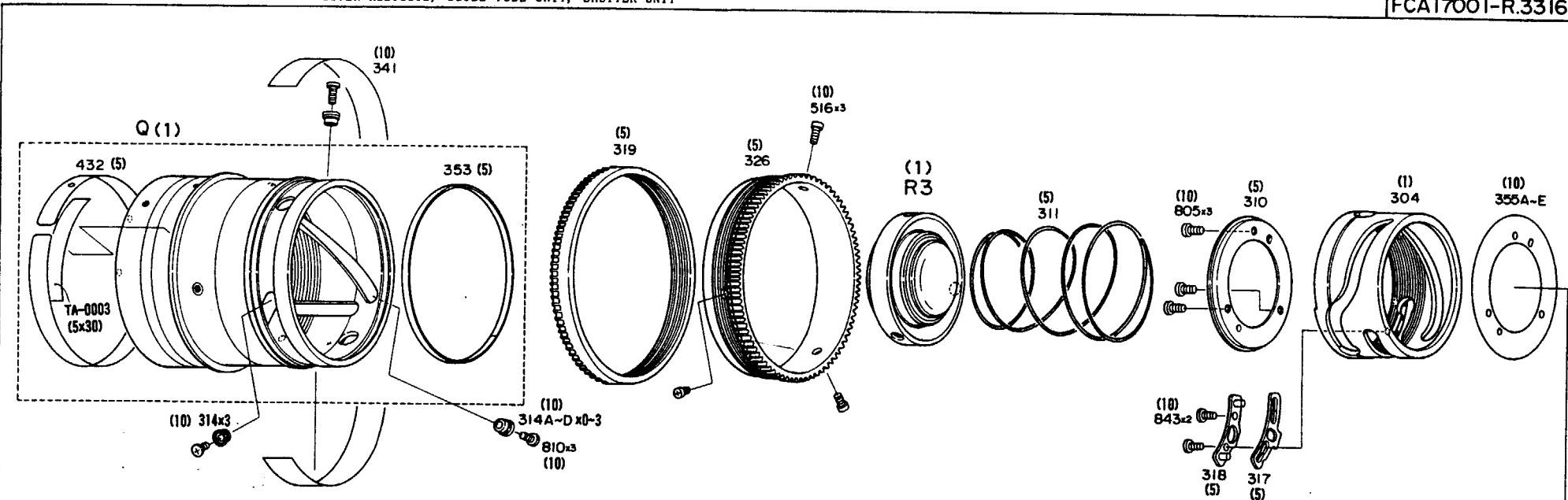


Fig. 4

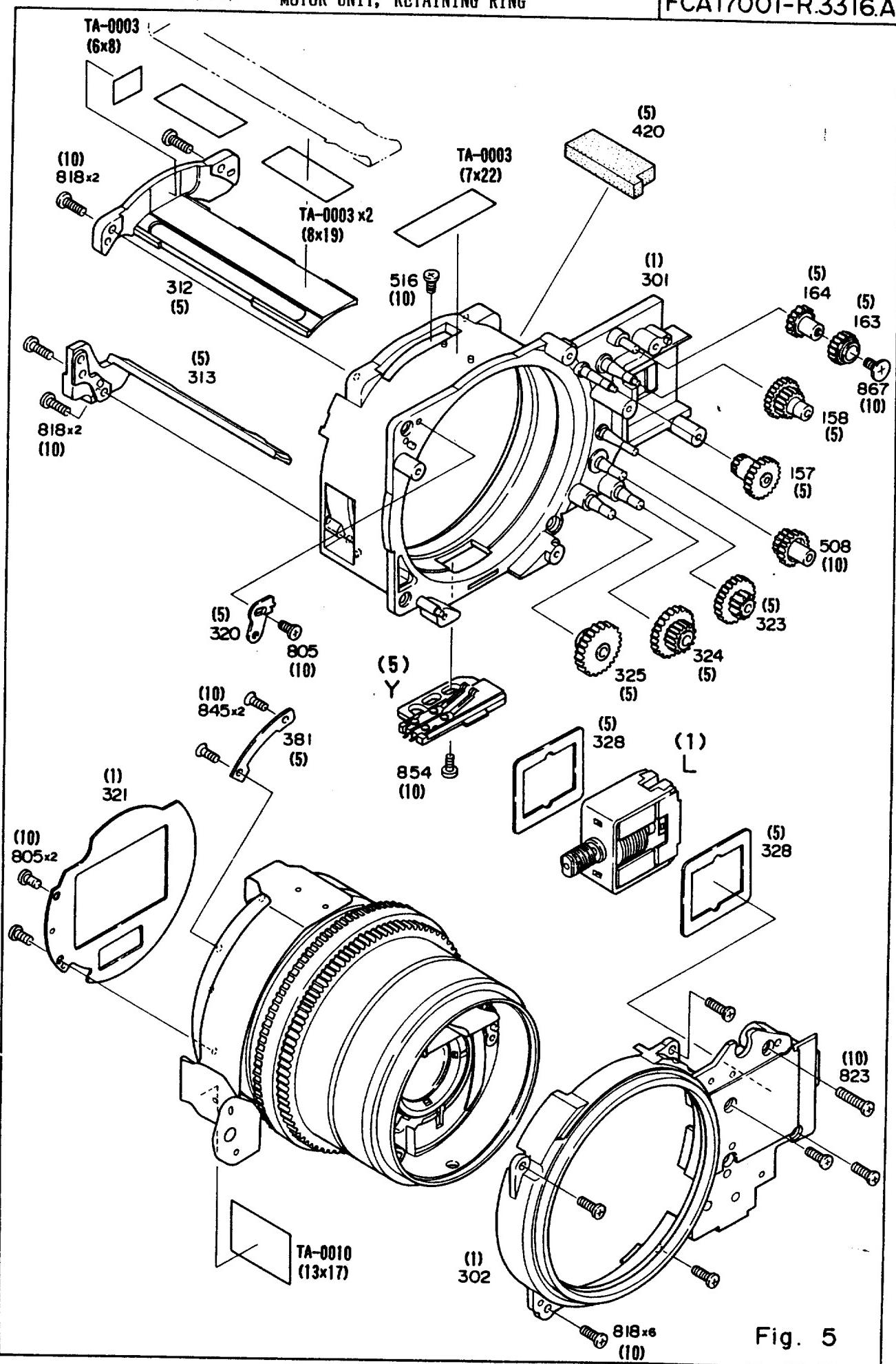


Fig. 5

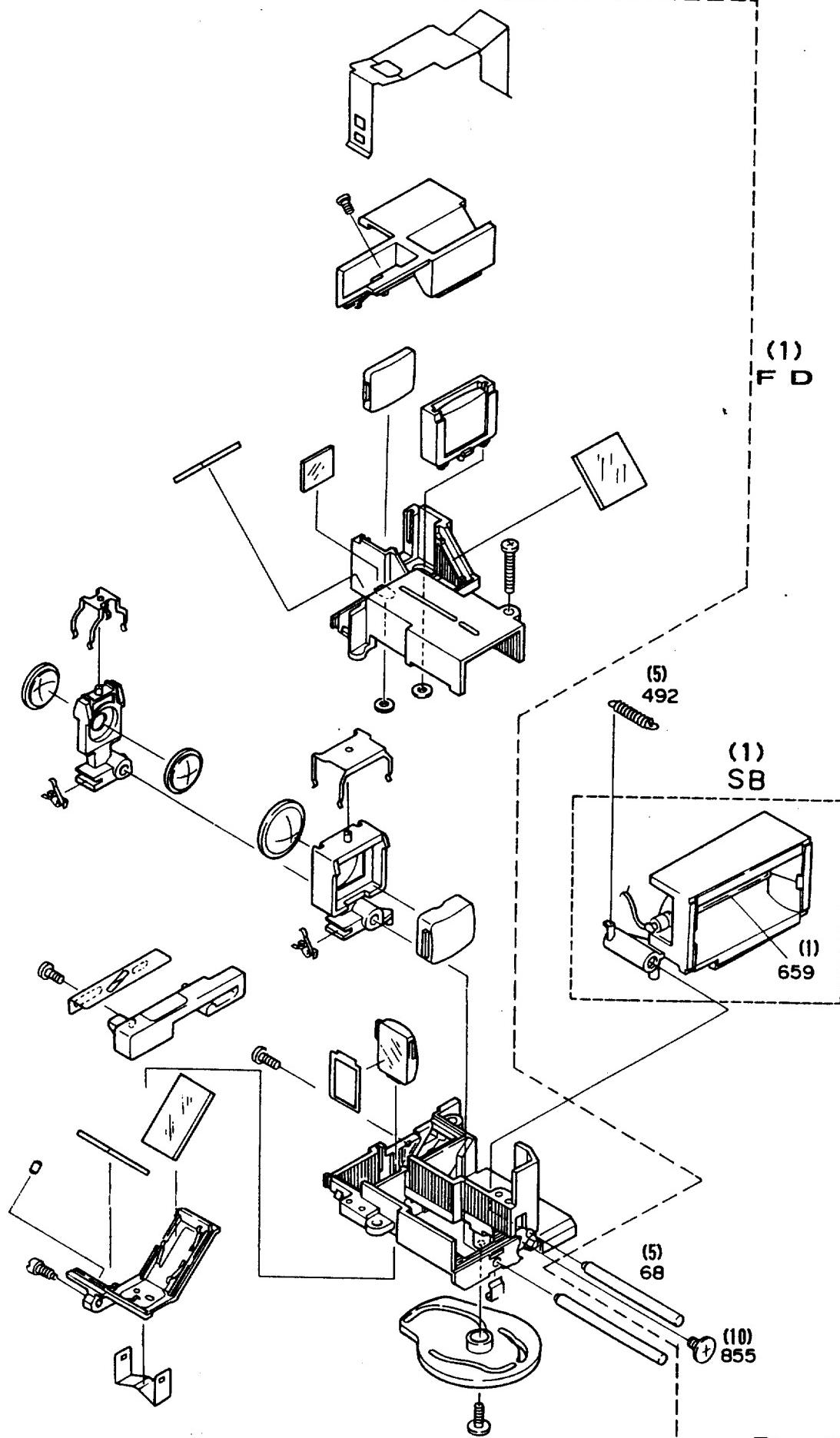


Fig. 6

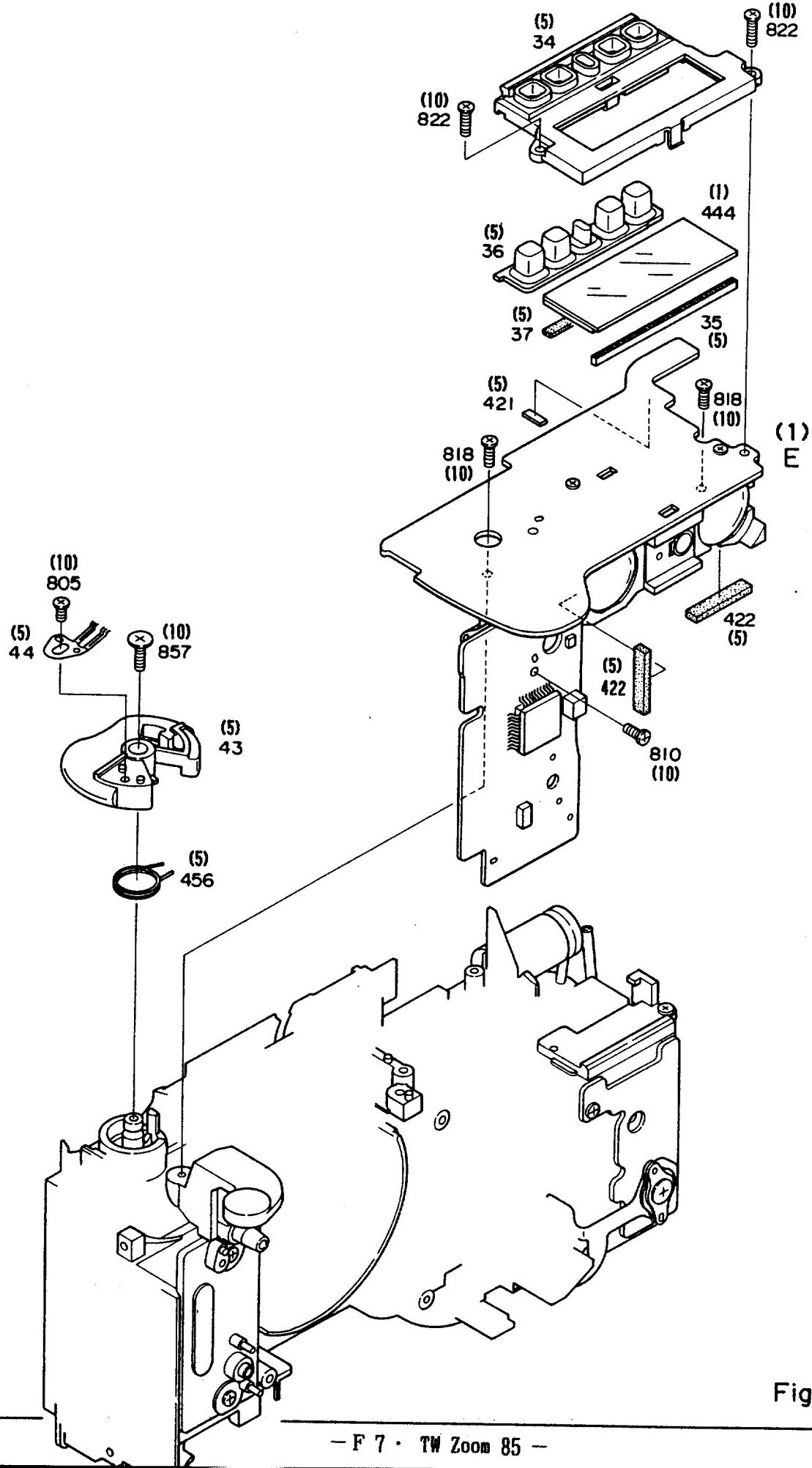


Fig. 7

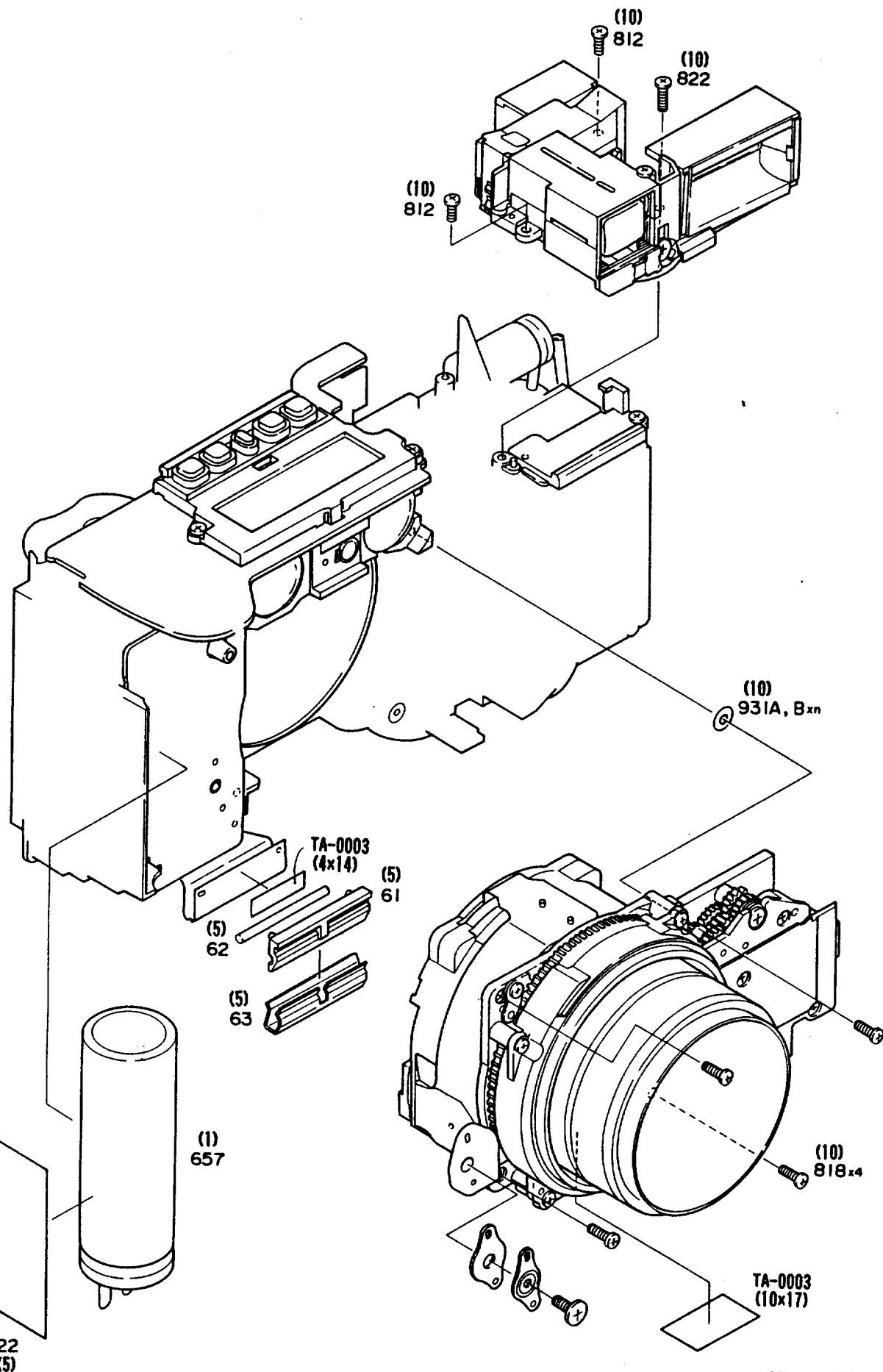


Fig. 8

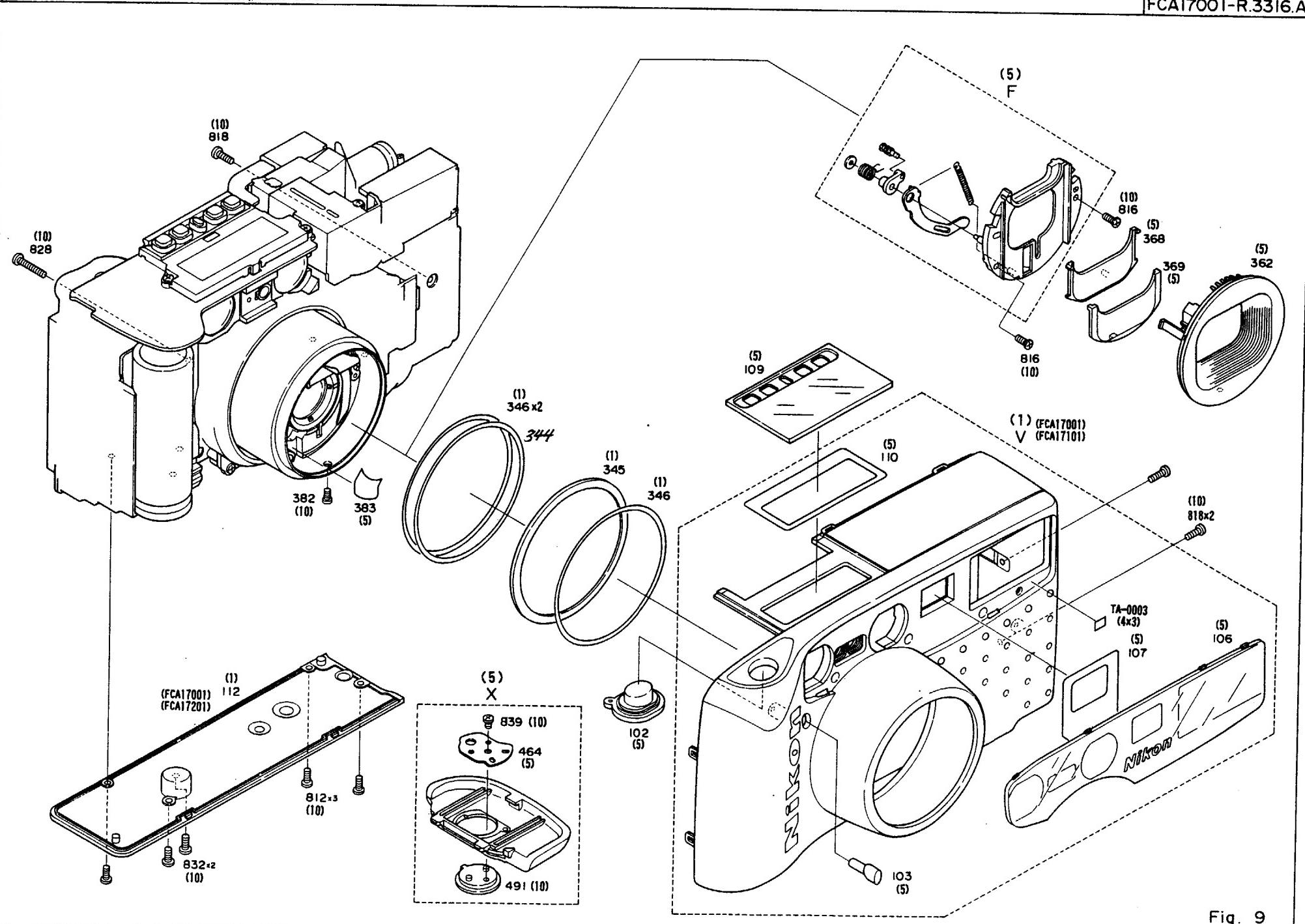


Fig. 9

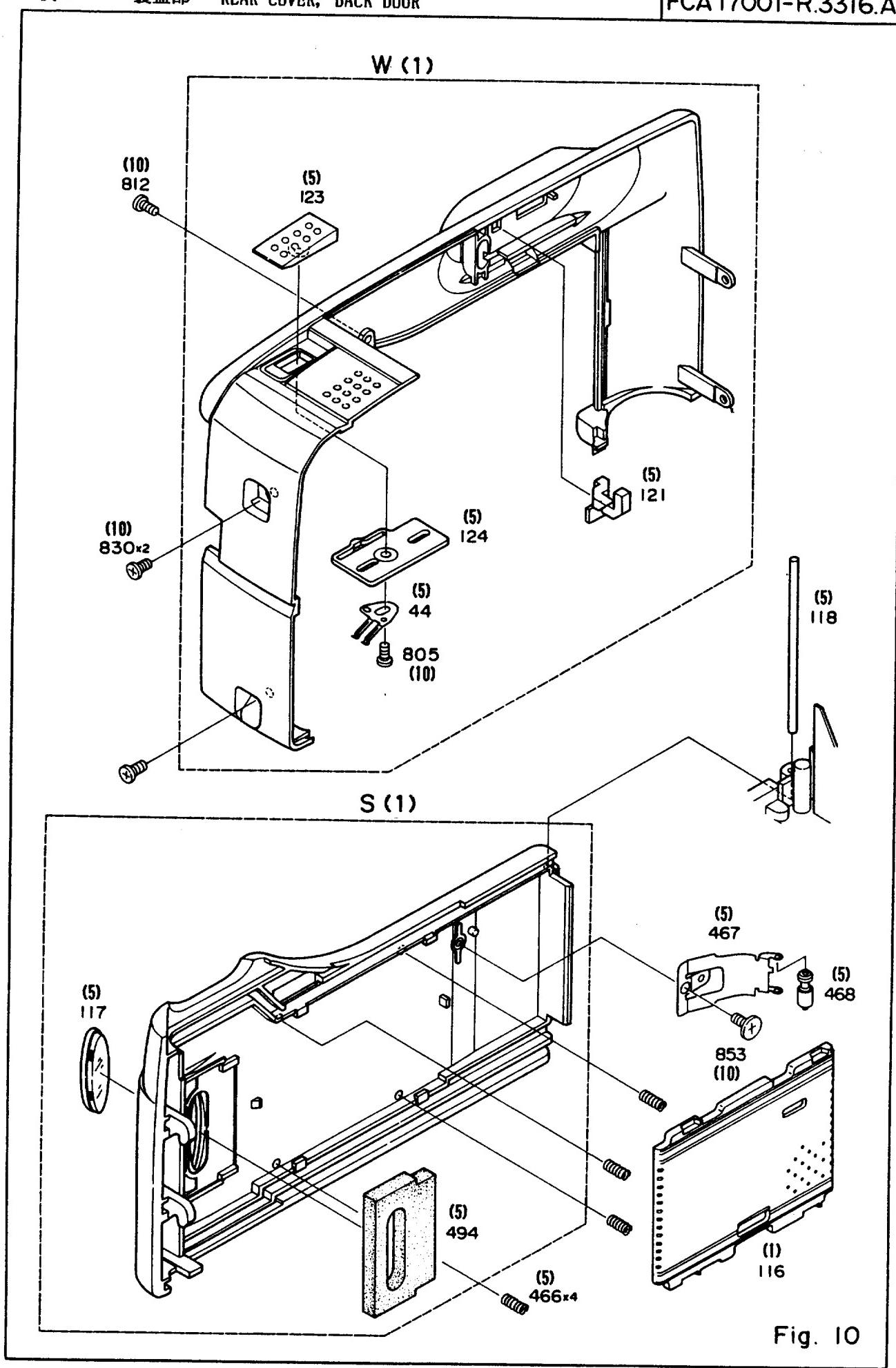


Fig. 10

部品表 Parts List

FCA17001-R..3316.A

部品番号 Part No.	補助番号 Ckt No.	名 称 Name	1台分 個 数 Q'ty Per Unit	部組品番号 Assembly	参照 図番 Pig. No.	販売区分 Class of Satisfi- ability	備 考 Remarks	要求単位 Order Unit Q'ty
7 (PCA17001-7)		G 7 G7	1		4	○		5
21 (PCA17001-21)		本体 Body die-casting	1		1	○		1
22 (PCA17001-22)		メインコン接着テープ Tape	1		8	○		5
23 (PCA17001-23)		遮光モルト Sponge	1		3	○		5
25 (PCA17001-25)		スプロ SWカバー Free sprocket SW cover	1		3	○		5
27 (PCA17001-27)		バトローネ押さえ Patorone retainer	1		1	○		5
29 (PCA17001-29)		裏蓋開閉モールド Lock key	1		1	○		5
31 (PCA17001-31)		DX接片 DX contact	4		1	○		5
32 (PCA17001-32)		DXカバー DX contact cover	1		1	○		5
34 (PCA17001-34)		LCDカバー LCD cover	1		7	○		5
35 (PCA17001-35)		エラスティックコネクター Elastic connector	1		7	○		5
36 (PCA17001-36)		モードボタン Mode button	1		7	○		5
37 (PCA17001-37)		LCDモルト Sponge	1		7	○		5
40 (PCA17001-40)		電池接片 (-) Battery contact (-)	1		1	○		5
41 (PCA17001-41)		電池接片 (+) Battery contact (+)	1		1	○		5

部品表 Parts List

FCA17001-R. 3316. A

部品番号 Part No.	補助番号 Ckt No.	名 称 Name	1台分 個 数 Q'ty Per Unit	部組品番号 Assembly	参照 図番 Fig. No.	販売区分 Class. of Salabil- ty	備 考 Remarks	要求単位 Order Unit Q'ty
43 (PCA17001-43)		ズームレバー Zoom lever	1		7	○		5
44 (PCA17001-44)		ズームレバー接片 Zoom lever contact	2	W	7.10	○△		5
46 (PCA17001-46)		パノラマフェンス Panorama fence	1		3	○		5
49 (PCA17001-49)		パノラマ押さえ1 Panorama frame retainer 1	1		3	○		5
50 (PCA17001-50)		パノラマ押さえ2 Panorama frame retainer 2	1		3	○		5
54 (PCA17001-54)		パノラマレバーバネ Panorama lever spring	1		3	○		5
55 (PCA17001-55)		パノラマ切替板 Panorama changing plate	1		3	○		5
56 (PCA17001-56)		パノラマシール Panorama seal	1		3	○		5
61 (PCA17001-61)		圧接モールド Press-contact mold	1		8	○		5
62 (PCA17001-62)		圧接ゴム Press-contact rubber	1		8	○		5
63 (PCA17001-63)		圧接バネ Press-contact spring	1		8	○		5
67 (PCA17001-67)		SBガイド Speed light guide	1		3	○		5
68 (PCA17001-68)		ガイド軸 Speed light guide shaft	1		6	○		5
102 (PCA17001-102)		レリーズ釦 Release button	1		9	○		5
103 (PCA17001-103)		セルフ窓 Self-timer window	1	V	9	○△		5

部品表 Parts List

FCA17001-R. 3316. A

部品番号 Part No.	補助番号 Ckt No.	名 称 Name	1台分 個 数 Q'ty Per Unit	部組品番号 Assembly	参照 図番 Fig. No.	販売区分 Class of Salaibi- ty	備 考 Remarks	要求単位 Order Unit Q'ty
106 (PCA17001-106)		A.E. AF窓 AE.AP window	1	V	9	O△		5
107 (PCA17001-107)		A.E. AF窓テープ Tape, AE.AP window	1	V	9	O△		5
109 (PCA17001-109)		LCD窓 LCD window	1		9	O		5
110 (PCA17001-110)		LCD窓テープ Tape, LCD window	1	V	9	O△		5
112 (PCA17001-112)		底カバー Bottom cover	1		9	O	NO. 5001001~	1
116 (PCA17001-116)		圧板 Pressure plate	1		10 11	O		1
117 (PCA17001-117)		バトローネ窓 Patorone window	1	S	10	O△		5
118 (PCA17001-118)		裏蓋軸 Back door shaft	1		10	O		5
121 (PCA17001-121)		LED窓 LED window	1	W	10	O△		5
123 (PCA17001-123)		メインSWレバー Main SW lever	1	W	10	O△		5
124 (PCA17001-124)		メインSW座 Main SW base plate	1	W	10	O△		5
157 (PCA17001-157)		Fギア1 F gear 1	1		5, 6	O		5
158 (PCA17001-158)		Fギア2 F gear 2	1		5	O		5
159 (PCA17001-159)		内ヘリコイド Inner helicoid	1		4	O		1

部品表 Parts List

FCA17001-R. 3316. A

部品番号 Part No.	補助番号 Ckt No.	名 称 Name	1台分 個 数 Q'ty Per Unit	部品番号 Assembly	参照 図番 Fig. No.	販売区分 Class. of Satisfi- ability	備 考 Remarks	要求単位 Order Unit Q'ty
163 (PCA17001-163)		Fギア4 F gear 4	1		4	○		5
164 (PCA17001-164)		Fギア3 F gear 3	1		4	○		5
201 (PCA17001-201)		スプール Spool	1		2	○		5
203 (PCA17001-203)		巻上基板 Winding base plate	1		2	○		1
204 (PCA17001-204)		巻戻しフォーク基板 Rewinding fork base plate	1		2	○		1
207 (PCA17001-207)		ギア11 Gear 11	1		2	○		5
208 (PCA17001-208)		ギア12-13 Gear 12-13	1		2	○		5
209 (PCA17001-209)		ギア14 Gear 14	3		2	○		5
210 (PCA17001-210)		ギア24-25 Gear 24-25	1		2	○		5
301 (PCA17001-301)		サブフレーム Sub frame	1		5	○		1
302 (PCA17001-302)		固定環 Retaining ring	1		5	○		1
304 (PCA17001-304)		3群カム環 3rd group cam ring	1		4	○		1
306 (PCA17001-306)		G7押さえ G7 retainer	1		4	○		5
307 (PCA17001-307)		1群付勢バネ Spring, 1st group	1		4	○		5
310 (PCA17001-310)		3群押さえ 3rd group retainer	1		4	○		5

部品表 Parts List

FCA17001-R. 3316. A

部品番号 Part No.	基動番号 Ckt No.	名 称 Name	1台分 個数 Q'ty Per Unit	部品番号 Assembly	参考 Fig. No.	選択区分 Class of Salaibi- ty	備考 Remarks	要求単位 Order Unit Q'ty
311 (FCA17001-311)		3群バネ Spring, 3rd group	1		5	O		5
312 (FCA17001-312)		直進キー1 Linear key 1	1		5	O		5
313 (FCA17001-313)		直進キー2 Linear key 2	1		5	O		5
314 (FCA17001-314)		ガイド環1 Guide ring 1 Φ4.0	3~0		4	O		10
314A (FCA17001-314A)		ガイド環1A Guide ring 1A Φ3.99	0~3		4	O	選択使用 Optional part	10
314B (FCA17001-314B)		ガイド環1B Guide ring 1B Φ4.01	0~3		4	O	選択使用 Optional part	10
314C (FCA17001-314C)		ガイド環1C Guide ring 1C Φ4.02	0~3		4	O	選択使用 Optional part	10
314D (FCA17001-314D)		ガイド環1D Guide ring 1D Φ4.03	0~3		4	O	選択使用 Optional part	10
317 (FCA17001-317)		クラッチ Clutch	1		4	O		5
318 (FCA17001-318)		クラッチガイド Clutch guide	1		4	O		5
319 (FCA17001-319)		シフトリング Shift ring	1		4	O		5
320 (FCA17001-320)		シフトストッパー Shift stopper	1		5	O		5
321 (FCA17001-321)		遮光枠 Light-baffle frame	1		5	O		1
323 (FCA17001-323)		Lギヤ4-5 L gear 4-5	1		5	O		5
324 (FCA17001-324)		Lギヤ6-7 L gear 6-7	1		5	O		5

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部品表 Parts List

FCA17001-R. 3316. A

部品番号 Part No.	補助番号 Ckt No.	名 称 Name	1台分 個 数 Q'ty Per Unit	部品番号 Assembly	参照 図番 Fig. No.	販売区分 Class, of Saliabil- ty	備考 Remarks	要求単位 Order Unit Q'ty
325 (FCA17001-325)		Lギア8 L gear 8	1		4	○		5
326 (FCA17001-326)		Lギア9 L gear 9	1		4	○		5
327 (FCA17001-327)		Lギア10 L gear 10	1		3	○		5
328 (FCA17001-328)		簡易モーター防振ゴム Vibration proof rubber	2		5	○		5
341 (FCA17001-341)		カムテープ cam tape	1		4	○		10
344 (FCA17001-344)		カーテン 1 curtain 1	1		9	○		1
345 (FCA17001-345)		カーテン curtain	1		9	○		1
346 (FCA17001-346)		カーテンワッシャー Washer	2		9	○		1
353 (FCA17001-353)		スエード Suede	1	Q	4	○△		5
355A (FCA17001-355A)		3群調整ワッシャーA t=0.10 3rd group adjustment washer A	1		4	○		10
355B (FCA17001-355B)		3群調整ワッシャーB t=0.10 3rd group adjustment washer B	1		4	○		10
355C (FCA17001-355C)		3群調整ワッシャーC t=0.10 3rd group adjustment washer C	1		4	○		10
355D (FCA17001-355D)		3群調整ワッシャーD t=0.10 3rd group adjustment washer D	1		4	○		10
355E (FCA17001-355E)		3群調整ワッシャーE t=0.10 3rd group adjustment washer E	1		4	○		10

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部品表 Parts List

FCA17001-R. 3316.A

部品番号 Part No.	補助番号 Ckt No.	名 称 Name	1台分 個 数 Q'ty Per Unit	部組品番号 Assembly	参照 図番 Pig. No.	販売区分 Class. of Salabil- ity	備 考 Remarks	要求単位 Order Unit Q'ty
361 (PCA17001-361)		鏡筒 Lens barrel	1		4	○		1
362 (PCA17001-362)		銘板 Name plate	1		9	○		5
364 (PCA17001-364)		遮光モルト Light-baffle sponge	1		4	○		5
368 (PCA17001-368)		バリア1 Lens cover 1	1		9	○		5
369 (PCA17001-369)		バリア2 Lens cover 2	1		9	○		5
379 (PCA17001-379)		連結レバー Connecting lever	1		4	○		5
380 (PCA17001-380)		ナット Nut, connecting lever	1		4	○		10
381 (PCA17001-381)		バリアカム Cam, lens cover	1		5	○		5
382 (PCA17001-382)		ネジ Screw	1		9	○		10
383 (PCA17001-383)		遮光シート Light-baffle sheet	1		9	○		5
385 (PCA17001-385)		フォーカスリング Focus ring	1		4	○		5

部品表 Parts List

FCA17001-R. 3316. A

部品番号 Part No.	補助番号 Ckt No.	名 称 Name	1台分 個 数 Q'ty Per Unit	部組品番号 Assembly	参照 図番 Fig. No.	販売区分 Class. of Salabil- ty	備 考 Remarks	要求単位 Order Unit Q'ty
386A (PCA17001-386A)		ガイド環 2A Guide ring 2A C=φ 4.21 D=φ 3.99	3~0		4	○	選択部品 Optional part	10
386B (PCA17001-386B)		ガイド環 2B Guide ring 2B C=φ 4.21 D=φ 4.00	0~3		4	○	選択部品 Optional part	10
386C (PCA17001-386C)		ガイド環 2C Guide ring 2C C=φ 4.21 D=φ 4.01	0~3		4	○	選択部品 Optional part	10
386D (PCA17001-386D)		ガイド環 2D Guide ring 2D C=φ 4.22 D=φ 3.99	0~3		4	○	選択部品 Optional part	10
386E (PCA17001-386E)		ガイド環 2E Guide ring 2E C=φ 4.22 D=φ 4.00	0~3		4	○	選択部品 Optional part	10
386F (PCA17001-386F)		ガイド環 2F Guide ring 2F C=φ 4.22 D=φ 4.01	0~3		4	○	選択部品 Optional part	10
386G (PCA17001-386G)		ガイド環 2G Guide ring 2G C=φ 4.23 D=φ 3.99	0~3		4	○	選択部品 Optional part	10
386H (PCA17001-386H)		ガイド環 2H Guide ring 2H C=φ 4.23 D=φ 4.00	0~3		4	○	選択部品 Optional part	10
386I (PCA17001-386I)		ガイド環 2I Guide ring 2I C=φ 4.23 D=φ 4.01	0~3		4	○	選択部品 Optional part	10
420 (PCA17001-420)		鏡筒遮光用モルト Light-baffle sponge	1		5	○		5
421 (PCA17001-421)		スエード Suede	1		7	○		5
422 (PCA17001-422)		遮光モルト Light-baffle sponge	2		7	○		5
431 (PCA17001-431)		底フレキ Connecting FPC	1		2	○		5
432 (PCA17001-432)		エンコーダフレキ Encoder P.P.C	1	Q	4	○△		5
444 (PCA17001-444)		L C D LCD	1		7	○		1

部品表 Parts List

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部品番号 Part No.	補助番号 Ckt No.	名 称 Name	1台分 個 数 Q'ty Per Unit	部組品番号 Assembly	参照 図番 Pig. No.	販売区分 Class, of Satisfi- ability	備 考 Remarks	要求単位 Order Unit Q'ty
456 (PCA17001-456)		ズームレバーバネ Spring, zoom lever	1		7	○		5
* 461 (PCA11001-233)		フィルム先端シール Film leader position index	1		1	○	TW20	5
464 (PCA17001-464)		電池蓋クリック Battery chamber click	1	X	9	○△		5
* 466 (PCA11001-116)		圧板バネ Pressure plate spring	4		10 11	○	TW20	5
* 467 (PCA11001-117)		Fアーム Film roller arm	1		10 11	○	TW20	5
* 468 (PCA11001-118)		Fローラ Film roller	1		10 11	○	TW20	5
* 469 (PCA11001-205)		ギア4-5 Gear 4-5	1		2	○	TW20	5
* 470 (PCA11001-206)		ギア6-7 Gear 6-7	1		2	○	TW20	5
* 471 (PCA11001-207)		ギア8 Gear 8	1		2	○	TW20	5
* 477 (PCA11001-217)		ギア26-27 Gear 26-27	1		2	○	TW20	5
* 479 (PCA11001-241)		ユニットSW Unit SW	2		2	○	TW20	5
485 (PCA17001-485)		円圧接ゴム Press-contact rubber	2		3	○		10
* 488 (PCA12001-132)		遮光モルト Light-baffle sponge	1		1	○	TW-ZOOM 35-70	10
* 489 (PCA12001-137)		遮光モルト Light-baffle sponge	2		1	○	TW-ZOOM 35-70	10
* 490 (PCA12001-112)		裏蓋鍵バネ Lock key spring	1		1	○	TW-ZOOM 35-70	10

部品表 Parts List

FCA17001-R. 3316. A

部品番号 Part No.	補助番号 Ckt No.	名 称 Name	1台分 個 数 Q'ty Per Unit	部組品番号 Assembly	参照 図番 Fig. No.	販売区分 Class. of Salabil- ity	備 考 Remarks	要求単位 Order Unit Q'ty
* 491 (PCA12001-126)		ロック蓋 Lock button	1	X	9	○△	TW-ZOOM 35-70	10
* 492 (PCA12001-306)		SBバネ Spring	1		6	○	TW-ZOOM 35-70	5
* 494 (PCA12001-110)		パトローネモルト Patrone sponge	1	S	10 11	○△	TW-ZOOM 35-70	5
* 502 (PCA12001-203)		モーターピニオン Pinion gear	1	D	1	○△	TW-ZOOM 35-70	10
* 503 (PCA12001-204)		ギア 2-3 Gear 2-3	1		2	○	TW-ZOOM 35-70	10
* 504 (PCA12001-218)		ギア 28 Gear 28	1		2	○	TW-ZOOM 35-70	10
* 508 (PCA12001-679)		Lギア 2-3 L gear 2-3	1		5	○	TW-ZOOM 35-70	10
516 (PCA17001-516)		Screw	4		4 5	○		10
517 (PCA17001-517)		円圧接板 Press-contact plate	2		3	○		10
623 (PCA17001-623)		サブコンデンサ Sub condenser	1	S X	3	○△		1
632 (PCA17001-632)		発振トランス Transformer	1	S X	3	○△		1
633 (PCA17001-633)		トリガーコイル Trigger coil	1	S X	3	○△		1
657 (PCA17001-657)		メインコンデンサ Main condenser	1		8	○		1

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部品番号 Part No.	補助番号 Ckt No.	名 称 Name	1台分 個 数 Q'ty Per Unit	部組品番号 Assembly	参照 図番 Fig. No.	販売区分 Class. of Saliabil- ity	備 考 Remarks	要求単位 Order Unit Q'ty
659 (PCA17001-659)		Xe管 Xenon tube	1	S B	6	○△		1
777 (PCA17001-777)		フォトインタラプタ Photo interrupter	1		2	○		1
803 (PCA17001-803)		Screw	4		3	○		10
* 805 (PCA11001-619)		Screw	12	W	1.2 4.5 7.10	○△	RF2	10
* 810 (PCA11001-810)		Screw	11		1.3 4.7	○	TW20	10
* 812 (PCA11001-620)		Screw	10		3.8 9.10	○	RF2	10
* 816 (PCA11001-817)		Screw	2		9	○	TW20	10
818 (PCA17001-818)		Screw	19		5.7 9	○		10
822 (PCA17001-822)		Screw	3		7.8	○		10
823 (PCA17001-823)		Screw	1		5	○		10
* 826 (PCA11001-819)		Screw	2		2	○	TW20	10
828 (PCA17001-828)		Screw	2	F D	9	○△		10
830 (PCA17001-830)		Screw	2		10	○		10
* 832 (PCA11001-821)		Screw	2		9	○	TW20	10

部品表 Parts List

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部品番号 Part No.	補助番号 Ckt No.	名 称 Name	1台分 個 数 Q'ty Per Unit	部組品番号 Assembly	参照 図番 Pig. No	販売区分 Class. of Salaibi- ty	備 考 Remarks	要求単位 Order Unit Q'ty
* 837 (PCA12001-801)		Screw	2		2	○	TW-ZOOM 35-70	10
* 839 (PCA12001-128)		Screw	1	X	9	○△	TW-ZOOM 35-70	10
841 (PCA17001-841)		Screw	3		4	○		10
843 (PCA17001-843)		Screw	2		4	○		10
845 (PCA17001-845)		Screw	2		5	○		10
851 (PCA17001-851)		Screw	2		3	○		10
853 (PCA17001-853)		Screw	1		10	○		10
* 854 (PCA12001-811)		Screw	1		5	○	TW-ZOOM 35-70	10
855 (PCA17001-855)		Screw	1		6	○		10
857 (PCA17001-857)		Screw	1		7	○		10
859 (PCA17001-859)		Screw	1		3	○		10
863 (PCA17001-863)		Screw	2		3	○		10
867 (PCA17001-867)		Screw	1		5	○		10
869 (PCA17001-869)		Screw	2		4	○		10

部品表 Parts List

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部品番号 Part No.	補助番号 Ckt No.	名 称 Name	1台分 個数 Q'ty Per Unit	部組品番号 Assembly	参照 図番 Pig. No.	販売区分 Class, of Saliabil- ity	備 考 Remarks	要求単位 Order Unit Q'ty
901		両面テープ 5×10 Double-sided adhesive tape	1		2	×	TA-0003	1 roll
902		両面テープ 7×17 Double-sided adhesive tape	1		2	×	TA-0003	1 roll
903		両面テープ 10×17 Double-sided adhesive tape	3		2, 8	×	TA-0003	1 roll
905		両面テープ 8×8 Double-sided adhesive tape	1		2	×	TA-0003	1 roll
906		両面テープ 4×14 Double-sided adhesive tape	2		3, 8	×	TA-0003	1 roll
907		両面テープ 13×17 Double-sided adhesive tape	1		5	×	TA-0010	1 roll
908		両面テープ 8×19 Double-sided adhesive tape	2		5	×	TA-0003	1 roll
909		両面テープ 4×6 Double-sided adhesive tape	1		1	×	TA-0003	1 roll
910		両面テープ 7×22 Double-sided adhesive tape	1		5	×	TA-0003	1 roll
911		両面テープ 6×8 Double-sided adhesive tape	1		5	×	TA-0003	1 roll
912		両面テープ 5×30 Double-sided adhesive tape	1	Q	4	×	TA-0003	1 roll
931A (PCA17001-931A)		取付座調整ワッシャー t=0.03 Adjustment washer	0~4		8	○		10
931B (PCA17001-931B)		取付座調整ワッシャー t=0.05 Adjustment washer	0~4		8	○		10

部品表 Parts List

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部品番号 Part No.	補助番号 Ckt No.	名 称 Name	1台分 個 数 Q'ty Per Unit	部組品番号 Assembly	参照 図番 Pig. No.	販売区分 Class. of Saliabili- ty	備 考 Remarks	要求単位 Order Unit Q'ty
1111		Lead wire (Purple) 155 mm	1	L		×	W-0080PU	1 roll
1112		Lead wire (Blue) 170 mm	1	L		×	W-0080BB	1 roll
1114		Lead wire (Brown) 120 mm	1	P		×	W-0056BN	1 roll
1115		Lead wire (Green) 140 mm	1	P		×	W-0056GN	1 roll
1117		Lead wire (Green) 195 mm	1	D		×	W-0080GN	1 roll
1118		Lead wire (Yellow) 195 mm	1	D		×	W-0080YB	1 roll
1120		Lead wire (Yellow) 60 mm	1	SB		×	W-0108YB	1 roll
1121		Lead wire (Black) 80 mm	1	SB		×	W-0108BK	1 roll
1122		Lead wire (Red) 65 mm	1	SB		×	W-0108RB	1 roll
1124		Lead wire (White) 185 mm	1			×	W-0108WH	1 roll
1125		Lead wire (Orange) 185 mm	1			×	W-0108OR	1 roll
1127		Lead wire (Black) 30 mm	1	SX		×	W-0108BK	1 roll
1128		Lead wire (Red) 20 mm	1	SX		×	W-0108RB	1 roll
1130		Lead wire (Black) 205 mm	1			×	W-0108BK	1 roll
1131		Lead wire (Red) 210 mm	1			×	W-0108RE	1 roll

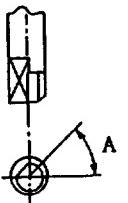
部品組合品表 Assembly List

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部品番号 Part No.	補助番号 Ckt No.	名 称 Name	1台分 個 数 Q'ty Per Unit	大部品番号 Main assembly No.	参考 Fig. No.	備考 Remarks	要求単位 Order Unit Q'ty
A (PCA11001-A)		フィルム押さえ部組 Body side film roller unit	1		1	TW20	5
B (PCA17001-B)		遊星ギア部組 Planetary gear unit	1		2		5
C (PCA17001-C)		巻き戻しフォーク部組 Rewinding fork unit	1		2		5
D (PCA17001-D)		W/Rモーター部組 W/R motor unit	1		1		1
E (PCA17001-E)		A F ホルダー部組 AF holder unit	1		7		1
F (PCA17001-F)		バリア押さえ部組 Lens cover retainer	1		9		5
F D (PCA17001-FD)		ファインダー部組 Finder unit	1		6		1
G (PCA17001-G)		パノラマレバー部組 Panorama lever unit	1		3		5
H (PCA17001-H)		アンプ基板部組 Amp. base plate	1		3		1
L (PCA17001-L)		鏡筒モーター部組 Helicoid motor unit	1		5		1
P (PCA17001-P)		スプロ SW部組 Free sprocket SW unit	1		3		1
Q (PCA17001-Q)		外ヘリコイド部組 Outer helicoid unit	1		4		1
R 1 (PCA17001-R1)		1群レンズ室部組 1st lens group unit	1		4		1
R 3 (PCA17001-R3)		3群レンズ室部組 3rd lens group unit	1		4		1

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部品番号 Part No.	補助番号 Ckt No.	名 称 Name	1台分 個 数 Q'ty Per Unit	大部品番号 Main assembly No.	参照 図番 Fig. No.	備 考 Remarks	要求単位 Order Unit Q'ty
S (PCA17001-S)		裏蓋部組 Back door unit	1		10		1
SB (PCA17001-SB)		発光部 Speed light unit	1		6		1
SX (PCA17001-SX)		スピードライト基板部組 Speed light base plate	1		3		1
SH (PCA17001-SH)		シャッター部組 Shutter unit	1		4		1
T (PCA17001-T)		直達筒部組 Guide tube unit	1		4		1
DIS U (PCA17001-U)		バリア軸 A=45° Lens cover shaft	1		4	DIS	5
U 1 (PCA17001-U1)		バリア軸1 A=43° Lens cover shaft	1		4	選択部品 Optional part	5
U 2 (PCA17001-U2)		バリア軸2 A=41° Lens cover shaft	1		4	選択部品 Optional part	5
DIS U 3 (PCA17001-U3)		バリア軸3 A=39° Lens cover shaft	1		4	選択部品 Optional part DIS	5
V (PCA17001-V)		前カバー部組 Front cover unit	1		9		1
V (U) (PCA17101-V(U))		前カバー部組 Front cover unit (TOUCH 600)	1		9		1
W (PCA17001-W)		後カバー部組 Rear cover unit	1		10		1
X (PCA17001-X)		電池蓋部組 Battery chamber lid	1		9		5
Y (PCA17001-Y)		リセットSW Reset SW	1		5		5

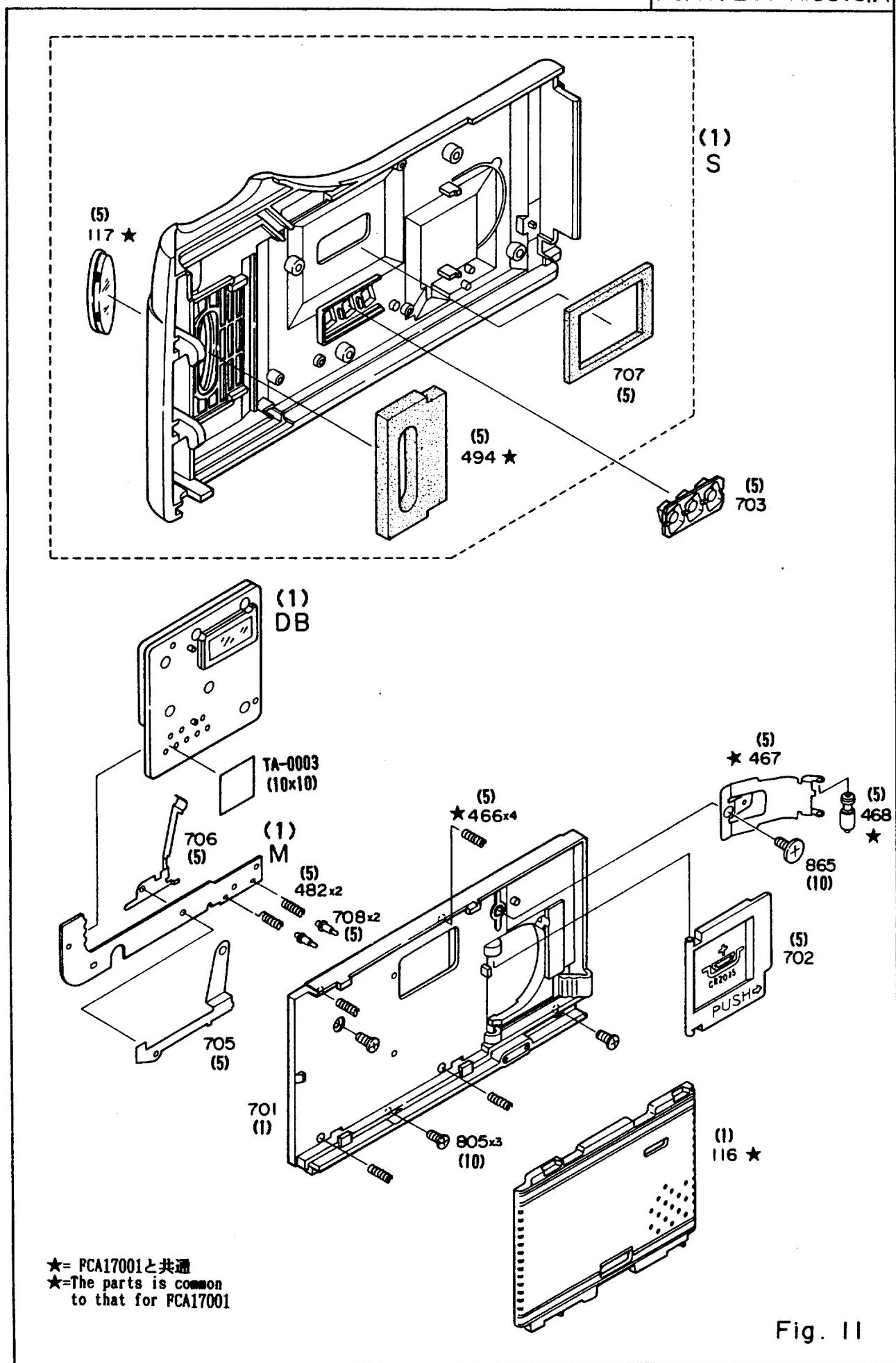


Fig. 11

部品表 Parts List

FCA17201-R. 3316. A

部品番号 Part No.	補助番号 Ckt No.	名 称 Name	1台分 個 数 Q'ty Per Unit	部組品番号 Assembly	参照 図番 Fig. No.	販売区分 Class of Salabil- ity	備 考 Remarks	要求単位 Order Unit Q'ty
112 (PCA17201-112)		底カバー (QD用) Bottom cover (QD)	2		9	O	NO 4001001~	1
482 (PCA17201-482)		Dセッテンバネ Spring	2		11	O		5
701 (PCA17201-701)		内蓋 Inner cover	1		11	O		1
702 (PCA17201-702)		DB電池蓋 DB Battery chamber	1		11	O		5
703 (PCA17201-703)		ファンクションSW Function SW	1		11	O		5
705 (PCA17201-705)		電池接片 (-) Battery contact (-)	1		11	O		5
706 (PCA17201-706)		電池接片 (+) Battery contact (+)	1		11	O		5
707 (PCA17201-707)		Dモルト Light-baffle sponge	1	S	11	OΔ		5
708 (PCA17201-708)		DB接点 DB contact	2		11	O		5
* 805 (PCA11001-619)		Screw	3		11	O	TW20	10
865 (PCA17201-865)		Screw	1		11	O		10
904		両面テープ 10×10 Double-sided adhesive tape	1		11	X	TA-0003	1 roll

部組品表 Assembly List

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